

# The Sight-Saving Review

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## Possibilities of Restoration of Sight and Prevention of Blindness in the Aid to the Blind Program\*

Anna M. Harrison

DESCRIBES the work of the State Department of Public Welfare in restoring sight and preventing blindness in Louisiana.

WHEN we stop to think about the blind as a group of handicapped people whose desires, hopes, and innate abilities are no different from those of seeing people, is it not a reflection on our society that until about 73 years ago little thought was given to assisting the needy blind? The first monetary aid to the blind was given in 1866 when New York made "donations" from city funds. Other states later followed this example. The protection and restoration of sight were not of vital interest to the world until 1884, when Dr. Karl Sigmund Cr  d   published his treatise on ophthalmia neonatorum, and Dr. Ernest Fuchs made his studies on the prevention of blindness. Following this, some sporadic yet very earnest attempts were made in the direction of education, steps taken to prevent communicable eye diseases from entering the country, and laws passed prescribing treatment for the eyes of the newborn, but not until within the last decade have real strides been made in the field of public welfare. It would be impossible for the states to revert now to former methods of handling the needy, the aged, and the blind. Inasmuch as time did not permit a comparative study of the meaning of the social security program to the blind in each state, Louisiana alone is being considered, for its program is more or less typical, if not a step ahead, of what is being done by other states to help this group of handicapped people.

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The status of the blind in Louisiana has changed greatly within the past ten years. Study shows that, prior to the signing of the Social Security Act on August 14, 1935, provision for the blind in Louisiana showed little planning. The first recognition of the special problems of the blind resulted in the establishment in 1852 of a state school for white children only. Not until 1922, or 70 years later, was there a school for the colored. Prior to 1924, the blind adult either supported himself as best he could or was taken care of by his family, as he received no pension nor any help from the state until that year when the first legislation for the blind was passed. This act defined the term "blind person" as "any person whomsoever who is totally blind in both eyes or any person whomsoever whose sight with the use of both eyes is so impaired as to make the sense of sight of no practical benefit or help in the pursuit of business, or in the course of earning a living." It exempted him from payment of license privilege or vocational tax in order that he might engage in private enterprise. There was no mention in this act of the disabled needy blind person who was not able to engage in remunerative work.

In 1928 a second act was passed. It created a State Board for the Blind and outlined its duties, functions, and powers. It defined a needy blind person as "one who is blind or partially blind, who, first, is 60 years or more; second, who is mentally incapacitated or has such physical handicaps other than blindness as to make him or her incapacitated for any kind of vocation." Records of the State Board for the Blind indicate that the applicant's blindness was established by a certificate from a recognized ophthalmologist. The doctor was not required to indicate the degree of applicant's blindness or to diagnose the cause. After blindness was established from a medical standpoint the representative from the State Board for the Blind—an untrained person—determined whether or not the applicant was needy. The middle-aged blind person without physical or mental handicaps was not mentioned. The act provided relief for "needy" blind persons, and fixed the maximum benefit at \$25 a month. No minimum benefit was specified. Additional duties of the Board included the preparation and maintenance of a complete register of the blind, giving condition, cause of blindness, capacity for education, and industrial training. It also provided



for suitable vocational training and established workshops for the blind and assisted in marketing products of blind workers. In 1934 the act was amended to provide that the appropriation for each blind person would not be more than \$25 nor less than \$10 monthly, and the police jurors or board of county commissioners appropriated the necessary sums.

### **Present Function of Public Welfare Departments**

Since 1935 the picture has changed considerably. Relief in Louisiana is being administered by the State Department of Public Welfare, and all blind persons who were formerly assisted by the police jurors in their respective parishes have been transferred to the local parish Department of Public Welfare, which agency decides if a person qualifies in point of need. If the investigation made by the Department of Public Welfare establishes need, a medical examination is requested.

Perhaps the most interesting difference regarding those patients now declared blind is the fact that, whereas formerly a patient was pronounced blind and eligible for relief, medical follow-up was often not done because those referred were the hopelessly blind. Now, after ocular examination, the patient with remediable defects is referred for treatment which is provided if he wishes to accept it. And, going one step further, not only are the totally blind examined and treated but also the visually handicapped—those for whom vision may be restored and permanent blindness prevented. While this last group of patients is not eligible for assistance in the category of Aid to Needy Blind because of federal regulations, assistance is given from state funds to prevent blindness.\*

### **Medical Social Work for the Blind**

Inasmuch as Louisiana is one of the few states having a state medical social worker for the blind, and is very anxious for suggestions, the program in effect will be outlined. Louisiana has approximately ten examining eye physicians whose offices are located throughout the state, and one state reviewing ophthalmologist, residing in New Orleans. The medical social worker for the blind has her office in the New Orleans Charity Hospital, the largest of six

\* McKay, Evelyn: The Blind under the Social Security Act.

general state hospitals. This hospital has a bed capacity of more than 3,000, equally divided between white and colored, and also has daily eye clinics, both races being treated. This location has been selected because a large percentage of the Aid to Needy Blind cases are patients either in the hospital or in the out-patient department, which treats nearly 500 weekly in its eye clinic. The state reviewing ophthalmologist is one of the visiting staff. Many ocular examinations to determine blindness are made in this clinic and many patients from the entire state may and do return there for surgery and further care. When an applicant appears eligible for Aid to Needy Blind, the Department of Public Welfare worker from the patient's parish sends to the medical social worker for the blind a "social summary," along with the request for ocular examination to determine eligibility. The outline for this summary was drawn up by the state reviewing ophthalmologist, who appreciates the social as well as the medical aspects of blindness, and contains medical and social information which should be helpful to the examining eye physician. The outline suggests the following points as being of importance: the care the patient received at birth; were drops placed in the patient's eyes; did he sustain a birth injury; what diseases did the patient have; and all the information possible relating to the patient's blindness. Another section of the outline is devoted to the patient's family, the incidence of blindness in the family, and the diagnoses—if possible, with source. Still another section requests information regarding dietary habits, and another asks for the resources available for recommended treatment. The summaries which follow the outline have been very helpful to the eye physicians at the time of examination and particularly to the reviewing ophthalmologist when the cases are studied and analyzed for statistical purposes.

When this social summary is received by the medical social worker for the blind, an appointment for an eye examination is made by her and she sends both the social summary and the medical blanks to the examining physician. These doctors have been selected by the state medical advisory committee of the Department of Public Welfare from the eye physicians who are in good standing in Louisiana and are listed in the American Medical Association Directory, and approved by the state reviewing ophthal-

mologist. They are either specializing in diseases of the eyes or are treating diseases of the ear, nose, and throat as well. The maximum distance a patient has to travel to be seen by an eye physician is approximately one hundred miles. The form used for the report on eye examination is the one drawn up by the Social Security Board, with which you are no doubt very familiar. After completion of examination, the medical blank, together with the social summary, is returned to the medical social worker for the blind. She presents it to the state reviewing ophthalmologist, who accepts or rejects the application for Aid to Needy Blind according to the contents of the medical report.

The Louisiana Public Assistance Act No. 53 of 1936 provides that a "person shall be considered blind who has no vision, or whose vision with correcting glasses is so defective as to prevent the performance of ordinary activities for which eyesight is essential." In accordance with the authority granted in the law, the State Department has promulgated the following more specific definition of blindness to determine eligibility: "Vision insufficient for use in an occupation or activity for which sight is essential, usually vision of less than 20/200 or restricted visual acuity in the better eye with correcting glasses, or a disqualifying defect in the visual field."\* There are times when the report is accepted provisionally. This occurs in cases of cataracts, or acute or chronic inflammations, when the examining physician feels vision can be improved. The patient is given assistance for the time he is blind and when cataracts have been removed, glasses fitted, or the inflammation has disappeared, the patient is re-examined to determine his eligibility. He is kept in the category of Aid to Needy Blind only if his vision is still 20/200 or less after correction.

Although all patients have not been examined in the same clinic and, therefore, are not known to the medical social worker for the blind, all medical reports are received by her. Her office has been of necessity a centralizing agency. The reasons for this are obvious. She prevents the scheduling of too many examinations with the same doctor on the same day; she schedules re-examinations so the patient will be seen by the physician who first saw him, and she

\* *Manual of Procedures*, State of Louisiana Department of Public Welfare.

keeps a file of all patients who have sought assistance as needy blind or who are actually receiving it.

In Louisiana, as of February, 1940, there were 1,032 grants representing 1,875 persons receiving assistance in Aid to Needy Blind category. This is 1.55 per cent of the total number of persons receiving assistance from the Department of Public Welfare. As compared with the United States census figures of 1930, which reported 1,252 blind in Louisiana, this would seem very high, for the census figures include all blind in Louisiana and this number of 1,875 covers only the needy blind. The discrepancy is no doubt accounted for by the fact that only the obviously blind are enumerated in census figures, whereas the Department of Public Welfare figures comprise all needy persons who apply for relief and have vision less than 20/200. To the census enumerators many of these persons would not be classed as blind. This very inclusion of border-line cases is an indication that the Aid to Needy Blind program not only takes care of those who are irrevocably blind, but is vitally interested in restoration of vision and prevention of blindness.

### **Constructive Plans for Applicants**

When patients have been accepted as Aid to Needy Blind cases by the Department of Public Welfare, their grants cover food, clothing, shelter, fuel, utilities, insurance, incidentals, and medical care. If the medical report indicates that vision may be restored with surgery or treatment, stress is laid on this aspect of the patient's needs. At first only persons between the ages of 16 and 64 were eligible for Aid to Needy Blind. At present all blind, irrespective of age, are included in the category. Very often, when there is a doubt as to the proper category, a medical report may be the deciding factor, especially if the patient needs ocular treatment, and, in the case of persons over 65, if dependency is due to blindness rather than to age.

In order to demonstrate what has been done from a constructive standpoint for Aid to Needy Blind cases, two studies have been made with particular attention to end results. The first study comprised the first 700 patients who were eligible for relief. It revealed many interesting things. There were 489 patients, or practically

70 per cent, for whom nothing could be done to restore vision. This figure seems startlingly large but it must be remembered that the obviously blind client was the client to be referred for aid in a new program, and many had been hopelessly blind for many years. For the remaining 211 clients the picture was not so discouraging. Surgery was recommended for 90, treatment for 109, glasses for 12. The following results were obtained: 17 patients were taken out of the category of Aid to Needy Blind; nine of these had cataracts removed, operations performed and glasses fitted, with vision in some cases restored to 20/30; three trachoma patients regained vision through treatment, while five patients had glasses fitted which improve vision. These 17 patients have not all had their assistance grants closed, as some were transferred to other categories, being too old or physically unable to work. Others no longer needed help because they were found to be employable.

The 194 other patients for whom treatment, surgery, or glasses were prescribed, and who still remain in the category of the blind, represent a very interesting group of persons. They might be divided into those who accepted the doctor's recommendations; those who refused them; and those who were prevented from following them through physical disability or lack of resources. Those who were willing and able to follow the doctor's suggestions numbered 108. This number may be broken up into cataract operations, 15; other surgery, nine; glasses, seven; ocular treatment, 40; anti-luetic treatment, 37. The second group of 34 represents the refusals: one treatment case; 19 surgical cases (other than cataract); and 14 cataract operations. The remaining 52 were less fortunate. While ocular care in itself was indicated for 14, physical disabilities, such as paralysis, senility, feeble-mindedness, and tuberculosis contra-indicated any attempt at surgery. Four patients expired before operations could be scheduled, and six persons had immature cataracts which did not warrant removal. Twenty-eight needed anti-luetic treatment and could not receive it because of the remoteness of their homes or because there was no venereal disease clinic in the parish in which they were residing. The last three groups, those who accepted treatment, those who refused it, and those for whom it could not be arranged, are our particular concern for they are the patients for whom there is a chance that vision might be restored.

A second analysis of end results comprises the next 600 patients referred for eye examinations by the Department of Public Welfare and who qualified for relief. It gives a more reassuring picture. Of these 600 referred, only 282 (or 47 per cent) were hopelessly blind as compared to the 70 per cent hopelessly blind in the first study. Of the remaining 53 per cent, or 318 patients, 20<sup>1</sup> already have been taken out of the category of Aid to Needy Blind because of restoration of vision through treatment and surgery. This figure represents nine patients who had operations for removal of cataracts and who were fitted with glasses; nine patients whose vision was improved with glasses after treatment; and two who were helped with treatment alone. One hundred and twenty-nine patients have accepted the doctor's recommendations and have had surgery performed or have received treatment, ocular or anti-luetic. Thirty-two others—more recently referred patients—have immature cataracts and are not ready for surgery at this time, and 21 who are to receive various types of treatment later on must be re-examined. This group is considerably larger than the corresponding group in the first 700 cases, because those of the first group were referred sufficiently long ago to have had recommendations carried out or at least one or several attempts have been made to this end. The number of patients who could not follow anti-luetic treatment in this last analysis is practically the same as in the first (29 as against 28), but the number who were not physically fit for ocular surgery is considerably less (12 patients). The one discouraging figure in this second analysis is the number of refusals to submit to either surgery or treatment. There were 75 such cases as against 34 in the first group. Is this due to lack of interpretation, fear of surgery, or fear of being removed from the relief rolls? Perhaps a bit of each. Failure on the part of the client to submit to recommended treatment is a problem met by all social workers and it is hoped that the discussion and exchange of experiences following this meeting will give to us all a broader vision, a clearer understanding, and increased skill in meeting this basic need if the work of the doctors is to be most effective.



### **Facilities Available for Ocular Treatment**

Any attempt to restore vision or prevent blindness presupposes: (1) availability of medical care by an eye physician, which includes clinics or hospitals where laboratory tests can be made as diagnostic aids, and venereal disease clinics where anti-luetic treatment can be secured; (2) interpretation to the patient so he will accept the ophthalmologist's recommendations and interpretation to the agency which is providing for the client's needs.

In Louisiana, where there are two large general state hospitals and four small area ones for the indigent, it will not be difficult to arrange for ocular care in the very near future. These hospitals are situated geographically to serve several parishes (or counties). When an eye department is functioning in each, indigent persons will be able to have hospital as well as clinical care in the center near their homes. At present patients are examined and treated by ophthalmologists located in the largest cities of Louisiana. When surgery is necessary, patients are sent to one of the two state hospitals or to the one area hospital which has an ophthalmologist on its staff and is equipped for ocular surgery. The fact that the area hospitals have not yet opened their ophthalmological departments, with the exception of one, apparently has been no hindrance in providing medical care, as patients have been sent to the two state hospitals or have received treatment from one of the ten examining ophthalmologists. On the other hand, is it one of the reasons why treatment has been refused? The blind person is inevitably more isolated than patients with other handicaps, as in a strange environment he is dependent on others for meeting his simplest needs. Add to this adjustment dependency on strangers, removal to a distant hospital where friends and relatives cannot visit because of expensive transportation, and do we have one of the answers to refusal of treatment?

### **Overcoming Ignorance and Fear**

In Louisiana, where free medical treatment has been one of our traditions, providing ocular care is not as difficult as interpreting to the patient the desirability of securing it. It is an understatement to say that ability to interpret is the social worker's most

valuable tool. She must interpret to the doctor the fears of the client and the limitations of the agency, to the community its pressing unmet needs, to the social agency the applicant's diagnosis and prognosis for restoration of vision, and to the patient something of the nature of his condition and the benefits to be derived from following recommendations.

There is so much ignorance on the part of the public regarding eyes, the diseases which affect them, the proper way of treating them, and even the proper persons to treat them, that she can never over-interpret. Applicants for Aid to Needy Blind come for the most part from the public agency where case loads are large and contacts made with clients at rather long intervals. Much of the interpretation to the patient will be done by the case worker of the non-medical agency, as it must be remembered that she is the one person who will have long-time, regular contact with the family of which he is a member. How can she convincingly discuss advisability and even necessity of treatment? Yet every case worker, no matter in what categories her case work falls, is called upon to interpret eye conditions. The set-up in Louisiana makes it imperative that each case worker do it.

As has been stated above, when the "Physician's Report on Eye Examination" is accepted, it is returned to the patient's case worker with an explanation of the cause of blindness and the doctor's recommendations, and at this point it must be remembered that the patient many times is seen in a center where neither the state medical social worker nor any other medical social worker is available. If an operation seems indicated to the examining physician, it very often falls to the case worker to discuss this with the patient, as the report, while sent through the state medical social worker, goes many times without any but the doctor's interpretation to the patient. The state reviewing ophthalmologist does not have every patient come to New Orleans for re-check, but makes his decision on the information contained in the report from the examining doctor. Therefore, no medical social worker has ever seen this patient.

How can the social worker in a distant county or parish dispel fears, clear up certain doubts, explain why an operation is advisable or even imperative, if her knowledge is limited? We do not want to coerce our clients nor do we have the right to do so; yet do we



want them to choose to neglect their eyes and refuse a chance of restoring or improving vision? The case worker should be the one to help the client at such times. She knows him more intimately, is familiar with his environment, and she should understand his hesitancy in accepting recommendations. The state eye worker for the blind or the eye worker in any given medical institution then becomes responsible for interpretation to this other worker, so that she in turn may win the co-operation of the patient. Those of us who work directly with eye patients know that one interview rarely convinces a patient or a parent of the need for surgery or long-time and often painful treatment. Therefore, in this case-work-by-proxy situation, can we expect quick results?

### **Cataracts**

It is regrettable that large numbers of our patients, particularly those in rural areas, remain blind from cataracts when excellent results are being had from operations. The rural patient fears the hospital. It is a traumatic experience to have to leave the familiar environment of home for an institution where he has a double adjustment to make, to new voices and to new surroundings. The operation itself is sometimes painful, and frequent returns to clinic are a real hardship. Fear is as great a deterrent as ignorance, especially when it is coupled with prejudice and superstition.

The social worker would find that knowledge of eye disease would be a great help in dealing with her clients, no matter in what category they are assisted, but especially for the category of Old Age Assistance. One of the results of old age is lowered visual acuity. The aged are becoming more and more our problem because of their relative increase in numbers, and preserving their vision will constitute one of our responsibilities as social workers.

### **Other Remediable Eye Diseases**

Not only with cataract cases is interpretation necessary but also with those patients who have non-congestive glaucoma of the painless type, which causes so much damage insidiously. These patients cannot understand why observation by an eye physician is necessary when vision is not improved. Patients with luetic eye conditions honestly question the continuance of anti-luetic treat-

ment after their eyes are cured. They, too, need patient handling to encourage them to follow treatment, so as to preserve vision or prevent serious systemic manifestations of the disease. Therefore we must expect to meet these fears, arguments, and superstitions one by one, and our correspondence files will grow and grow for no one of us can anticipate in any given case the problems which will arise, but through a strong co-operative relationship between the eye worker and the family case worker each stumbling-block will be hurdled and ultimately, in many more cases, treatment effected.

### **Psychological Factors in Examination and Diagnosis**

Fear and ignorance are not the only difficulties one meets in working with this group. Besides the fear of operation and the unwillingness to follow treatment, there is the difficulty of fluctuation in vision. It has been noticed that a few patients who report for the initial examination to determine blindness have lower vision at that time than at any other clinic visit. Is it because the patient has been told he is being examined to determine his eligibility for Aid to Needy Blind, and fears that if he does not qualify in that category he will not be given assistance? Does it not fall to the interviewer of the relief agency to prepare the patient so that he will have no fear of being found ineligible? Is our drive to catalogue people forcing patients to desire or even feign blindness in order to get assistance? What does this mean to the patient and what does it do to him? Without proper interpretation that assistance may be given in some other category, the patient gets the impression that he must be blind or do without relief.

Psychologically, blindness, real or pseudo, has a paralyzing effect, due undoubtedly to centuries of neglect of the real potentiality of the blind. In other relief categories we have the psychologically unemployable and we have accepted these men and women who have developed a feeling of inferiority, due often to the years of depression during which they sought work without success, and who are convinced that they cannot work and compete in normal industry. Through no fault of theirs they were unemployed and now years of dependency have taken from them all confidence in themselves, and when a job turns up they have convinced themselves

that they could not hold it. This fear manifests itself in all sorts of nervous and physical symptoms.

The pseudo-blind are the victims of the same delusions. They admit to almost complete dependency and retire wholly within themselves. Two or three patients have been known to us who received treatment and glasses and subsequently were pronounced ineligible for Aid to Needy Blind because of improvement in vision. Shortly afterwards they returned to the doctor, complaining of inability to see. No physical bases for their blindness were found, yet repeated attempts failed to improve vision. This fear on the part of the patient that he will not qualify for Aid to Needy Blind springs from his lack of security, as the patient knows and the social workers know, too, that unless he can fit into one of the Social Security categories his chances of assistance may be minimized. These clients who fear becoming ineligible for Aid to Needy Blind do have ocular defects, they do get to see an eye physician and actually receive treatment. This is constructive from a medical standpoint, and in the final analysis the patient almost always reaps many benefits.

While the public program assists unemployables and some employables, it is not able to help all because of lack of funds. Therefore, the well-intentioned interviewer tries to fit the patient into a Social Security category. If he is under 65 years and has an eye complaint, the category of the blind seems to be the solution. The relief worker's position is a difficult one. She is faced with a large number of applicants for relief and, in her desire to help as many as possible, tries to have her clients certified in Social Security categories. While no one has the answers to all the problems, it seems that sufficient interpretation and a large enough relief budget for unemployables and employables would be a tremendous help, as we know that insufficient relief appropriations are causing physical and psychological illnesses.

### **Opportunities to Restore Sight**

The opportunities for restoration of vision in an Aid to Needy Blind program are many. First of all, the state agency attracts many hundreds of applicants yearly. Medical examinations of all applicants are required to determine eligibility. Ocular examina-

tions are requested for those with visual complaints. Thus, before the case has been accepted, an initial step in restoration of vision has been taken. Those needing medical and ocular care in Louisiana may be treated at one of the state hospitals. The Department thus functions at first as a case-finder, referring the patients to the proper medical institutions. Its next function is that of materially aiding the patient by including in his budget medicines, diets, glasses, transportation to hospitals or clinics. As a rule, eye patients usually report to several clinics, so that medical care for them is an important and sizeable item of their budget. Furthermore, this care is continuous if the doctor deems it necessary. These patients are followed by the medical social worker who schedules re-examinations when they are indicated by the examining physicians, and in the meantime the agency is advised of progress. When vision is restored and further treatment is not indicated, the case workers are notified. Ideally, these patients are assisted in another category until they have been able to adjust themselves to a new way of life or perhaps secure work.

The restoration of vision for these clients is the result of the combined efforts of the examining physicians throughout the state who have given excellent co-operation; of the doctors in the hospitals where patients later receive treatment or surgery; of the state reviewing ophthalmologist, because of his awareness of the constructive possibilities of the program and his vigilance in reviewing and analyzing reports; of the case workers in the agency who are constantly interpreting recommendations to patients and assisting them with material aid in following out these recommendations. In the program of restoration of vision the primary function of the medical social worker for the blind is interpretation to the case workers who are actually contacting the clients. In fact, the rôle of the general medical social worker is becoming one of interpreting to the case worker, as more persons apply for assistance and are referred to medical agencies.

### **Prevention of Blindness in Louisiana**

In Louisiana there is a prevention of blindness program which functions as does the Aid to Needy Blind program with a few exceptions. There is no definition of what constitutes a prevention of

blindness case. The Louisiana Public Assistance Act No. 359 of 1938 states: "Temporary assistance may be granted to any person who is in need of treatment, whether to prevent blindness or to restore his eyesight. Although the person is not blind to such a degree that he is eligible for 'Aid to Needy Blind,' the grant may be used to pay necessary traveling and other expenses to receive treatment from a hospital or clinic designated by the state department. No assistance of this kind may be granted to a person who is reasonably able to pay such expenses without such assistance."\* These cases may be referred to the Department of Public Welfare by physician, parish health unit doctor or nurse, teacher, or social worker. The public may apply directly.

The same outline of social data used for Aid to Needy Blind cases accompanies the request for an ocular examination to prevent blindness. The same form, "Physician's Report on Eye Examination," is used, but it is marked for "Prevention of Blindness Only." Examinations are scheduled by the state medical social worker for the blind, who, after examination is made, sends recommendations to the parish worker. The differences are that there is federal participation in Aid to Needy Blind cases, whereas the prevention of blindness program is borne entirely by the state; and whereas in the former all the patient's needs are included in the budget, in the latter the patient may or may not receive assistance only for ocular care. This aid usually includes cost of transportation to clinic or doctor's office, doctor's fee (if a private ophthalmologist is seen), medicines, glasses, diet, or anti-luetic treatment when indicated. As soon as the patient is discharged, the grant is stopped. These persons may not necessarily come from dependent families. They are from the low economic, border-line families whose income prohibits such extra expenses as their eye condition necessitates.

Recently, a review was made of cases referred during a two-year period. About 70 per cent were children. There were over 20 diagnoses, ranging from eye conditions due to syphilis and faulty diet, congenital cataracts and crossed eyes to a simple need for glasses. These patients were referred mostly by the social workers and came from families in which there was a worker on Works Progress Administration, Farm Security Administration, Civilian Conserva-

\* *Manual of Procedures*: State of Louisiana Department of Public Welfare.

tion Corps, or National Youth Administration. Thirty per cent were from families of small wage earners not known to any federal or state agency. Teachers referred large numbers of school children, and some patients applied directly to the Department of Public Welfare.

It was evident from the analysis that more interest in prevention of blindness was prevalent in some sections of the state than in others, a number of referrals coming from certain parishes while other parishes referred no cases at all. It has been felt that interest must be aroused in the inactive parishes and interpretation must be given to the active ones, who, in their zeal to prevent blindness, referred a number of patients who needed only glasses. On the other hand, some excellent cases were brought to the attention of the eye physicians, such as congenital and traumatic cataracts, crossed eyes in children, and congenital syphilis causing interstitial keratitis. In adults there were cases of optic atrophy and potential glaucoma. Many persons above 40 years of age were given the benefit of an eye examination by an ophthalmologist, instead of buying glasses in a department store or being tested for them by a non-medical person. Besides getting properly fitted glasses, these patients had a thorough examination of eye grounds, which definitely ruled out the possibilities of latent serious eye diseases. The end results were gratifying; surgery and ocular and anti-luetic treatment were advised and secured, and a larger number were fitted with glasses. While we can actually count these patients as so many definite cases helped, we cannot estimate the constructive work accomplished in prevention of blindness.

Examinations for glasses by an eye physician may be just as much prevention of blindness as taking care of a diseased eye, though not so dramatic. The examined patient becomes eye-conscious and tells others about his experience. However, it would be undesirable for the social worker to become too absorbed in referring patients for glasses when there are more important conditions demanding ocular care. Inasmuch as prevention of blindness must be carried on by the state without federal financial participation, and inasmuch as the state itself has no funds earmarked for this special purpose in the general relief program, the ingenuity and judgment of the resourceful social worker is taxed that the best pos-



sible use of funds be made and the greatest good done for the greatest number. The Welfare Department can only hope to do prevention of blindness work within a limited area, and the welfare worker can start with her own case load and the new referrals coming to the attention of the Department.

### Summary

While a state department can do much in restoration of vision and prevention of blindness, to get the best results this program, which has many phases, should have the participation of the entire community. The foundation for such a program is education of the public. This is of prime importance. The state societies for the prevention of blindness can best fill this need. Just as lay groups have been responsible for arousing the public to the problems of tuberculosis and of the crippled child and are making them aware that cancer can be controlled and syphilis stamped out, so can they arouse widespread interest in prevention of blindness.

For obvious reasons, the medical profession does not feel this is its function. The doctors are curing those already afflicted, or are doing research to find new cures and new techniques. Through education of the public, disease should be prevented. Departments of health have much to contribute through supervision of midwives and establishment of venereal disease clinics. The department of education, through the physical examination of every school child and a carefully given visual test, discovers conditions at a time when treatment is most effective. Lay groups may be instrumental in stimulating interest in certain legislation and also in fostering programs which would directly or indirectly prevent blindness. A routine Wassermann on every expectant mother, the establishment of a venereal disease clinic in every parish, an ocular examination as a school entrance requirement, more sight-saving classes in the state for both white and colored children—these are some of the objectives which Louisianians could well foster.

The social workers in a public agency and the medical social workers in hospitals have a unique opportunity for case finding in that they see early cases in which preventive work would be effective. The patients with abnormalities of the eyes, the patients who report to clinics but are not getting their medicines or who do not

understand the importance of following recommendations—these are the clients for whom prevention of blindness is possible. Eye consciousness on the part of the Department of Public Welfare workers alone would mean that 120,335 persons in Louisiana would receive proper eye care when needed. Awareness of ocular difficulties by interviewers, case workers and supervisors is necessary in order for this to be accomplished. Some of the case histories received show that patients have sought treatment from quacks or "traiteurs" and used remedies which definitely contributed to loss of vision. It is hoped that such practices will cease through the vigilance of case workers and the education of the public.

The function of the social worker for the blind in a state agency is still in the formative period, like that of the medical consultant in the field of public welfare. The state eye worker sees only some of the patients for whom restoration of vision or prevention of blindness is being attempted, but through medical social consultation with the case work staff she is able to advise and assist and thus reaches out to a larger group. The Social Security Board has clearly defined the areas in which the consultant can be most effective: she can assist in planning and in developing standards and criteria of performance; she can be called in consultation on specific problems, and she can demonstrate within her area the use of specialized methods for purposes of staff training or public education.\*

\* *Blakeslee, Ruth O.*: The Use of the Consultant.



## Personal Reminiscences\*

John M. Glenn

NO one is better qualified to reminisce on the early days of the prevention of blindness movement in the United States than the author, who was a founder of the Society and is today one of the honorary vice-presidents.

THE origin of the National Society for the Prevention of Blindness was due to a happy series of entirely unexpected events which followed one another in close succession, and to the co-operation of enthusiastic persons who let no grass grow under their feet when they set out to create something new to advance the public good.

Russell Sage died in 1906 and left a big fortune to his widow for use in ways that might seem best to her. She wished, first of all, to provide a substantial memorial to her late husband. At her request, several plans were submitted by her legal counsellors, Robert W. and Henry W. deForest. From these she selected one outlining a plan for a foundation to improve social and living conditions in the United States of America. Russell Sage Foundation was thereupon chartered, endowed by Mrs. Sage with \$10,000,000, and inaugurated in April, 1907. She became president of the corporation, and continued as president until her death, shortly before the Armistice in 1918.

In 1903, the legislature of New York, chiefly at the suggestion and urgency of Dr. Park Lewis of Buffalo, had authorized the creation of a Commission to Investigate the Condition of the Blind in the State. This Commission decided to take a comprehensive census of the blind who were living in the state, and engaged Edith Holt, daughter of the publisher, to direct it. Her sister, who had

\* Presented at 1939 Annual Conference of the National Society for the Prevention of Blindness, Inc., October 26, 1939.

been the mainspring in the organization of the New York Association for the Blind, co-operated with her, and these wide-awake young women lost no time in appealing to Russell Sage Foundation for a grant enabling their Association to obtain proper office space, and the director of Russell Sage Foundation was impressed with the importance of their work and their efficiency. They got \$12,000 from the Foundation.

Among the trustees of Russell Sage Foundation were two remarkable women, Louisa Lee Schuyler and Gertrude S. Rice. They had been lifelong friends and had served together under the notable United States Sanitary Commission, which took care of the wants of Union prisoners and other victims of misfortune during our Civil War. Miss Schuyler had also been responsible for the founding of Bellevue Training School for Nurses, the first of its kind in this country, and was the prime mover in organizing the State Charities Aid Association of New York. Early in 1908 Miss Schuyler was attracted by a bulky package in her mail, and found that it contained a report of Dr. Lewis' commission. In it were some pictures of children suffering from ophthalmia neonatorum, commonly called "babies' sore eyes," a disease which can be warded off by dropping into the eyes of a baby soon after its birth a solution of nitrate of silver. Under the picture was the legend, 'Unnecessarily Blind.' Moved by these instances of preventable blindness and its effects, Miss Schuyler determined at once to see what could be done to initiate effective steps for eliminating this terrible affliction. She immediately got some pamphlets written by Dr. Lewis. One of these appealed to laymen for help in securing the adoption of legislation and other measures that would save the sight of babies.

Miss Schuyler suggested to the Executive Committee of Russell Sage Foundation appointment of a special committee to consider the problem of the prevention of blindness in the state. She was named chairman, and Mrs. Rice and myself were the other members of this Russell Sage Foundation committee. Dr. Lewis was invited to lunch with Miss Schuyler's committee and discuss possible ways of having his desires realized. He responded promptly, and on May 9, 1908, there met with these two, Mrs. Rice, Miss Winifred Holt, Mrs. Edward T. Hewitt, and Dr. J. Clifton Edgar. From discussion at this luncheon came the plan to organize a com-

mittee of physicians and laymen, the purpose of which would be the promotion of measures to prevent blindness in New York State. It was agreed that this committee should be a special committee of the New York Association for the Blind, and that Russell Sage Foundation should be asked for a grant to start the committee safely on its way.

In May, 1908, Russell Sage Foundation made a grant of \$5,000 to the New York Committee to cover one year's expenditures. P. Tecumseh Sherman became its chairman, and it was formally organized on June 1. So, within less than two months from the day when Miss Schuyler had been inspired to start an active movement to secure freedom from blindness for many of its potential victims, the movement was effectively launched, and Dr. Lewis saw his fine dream come true.

Next steps were the renting of an office and appointment of a secretary for the New York Committee to carry out its aims. George A. Hubbell became the first secretary; he was succeeded in 1909 by Carolyn C. Van Blarcom.

Among the consequences that followed from the creation of the New York Committee were requests from various parts of the country for information and advice as to how to proceed in planning for prevention of blindness. It was not possible for the secretary to take care of these inquiries in addition to her work for New York; Russell Sage Foundation was therefore asked to make a grant of \$5,000 to its own committee to enable the latter to engage a secretary to carry on work nationally outside of New York. The grant was made in December, 1909, and three months later Samuel E. Eliot was engaged as secretary of the Russell Sage Foundation Committee.

The next important milestone was a small conference called by the Russell Sage Foundation Committee. About 70 people attended. Before adjourning, the conferees passed a resolution recommending the formation of a national organization for prevention of blindness. Dr. Lewis was chosen as chairman, and empowered to appoint a board of directors. This action seems to have been largely inspired by E. Leavenworth Elliott, an illuminating engineer and editor, who saw things in the large and led conference members to believe that large contributions for the support of such

an association could be secured easily from gas and electric companies and others. Another man also first appearing actively on our scene at this conference was Edward M. Van Cleve, who was to become the most important figure in the future of the movement. Mr. Van Cleve was principal of the Ohio Institution for the Education of the Blind and chairman of the Ohio Commission for the Blind. He, with Dr. Hiram Wood, an ophthalmologist from Baltimore, and James P. Monroe, chairman of the Massachusetts Commission for the Blind, were appointed a committee to map out a tentative plan for the organization of the new association.

At a meeting held in March, 1911, this committee recommended formation of an independent national organization. Its aims would include not only prevention of blindness, but also measures for improving the eyesight of people who are not blind. Therefore, the title suggested for the association was "American Association for the Conservation of Vision." The recommendations of the committee were adopted, an excellent board of directors was appointed by Dr. Lewis, and the Association was launched. The question of the respective functions of this new national association and the Russell Sage Foundation Committee inevitably arose.

Messrs. Van Cleve, Wood, and Monroe were deputized to confer with the Russell Sage Foundation Committee and ask that it consolidate with the Association. After careful consideration, the Russell Sage Foundation trustees, in May, 1911, discharged the committee at its request, and authorized transfer to the Association of all the property and assets of the Committee, including the unexpended balance of Russell Sage Foundation's grant. Mr. S. E. Eliot became a member of the staff of the Association, and promotion of national work was left entirely in the hands of the new Association.

Unfortunately, the high hopes of large contributions were not realized. After spending the money given by Russell Sage Foundation, chiefly on salaries and an effective exhibit shown at the Metropolitan Opera House, the Association lapsed into a period of quiescence, and its directors were faced with debts and an empty treasury. The burden of seeing that the debts were paid and of restoring life to the national movement, fell chiefly on Dr. Lewis, Mr. Van Cleve, and Dr. Jacob A. Shawan, Superintendent of Schools of Columbus, Ohio. Their first ray of hope came at a

luncheon in Buffalo with Jerome D. Greene, then Executive Director of the Rockefeller Foundation. He was appealed to for help, on the ground that prevention of blindness was an important division of the public health movement, which was a main interest of the Rockefeller Foundation. Though Mr. Greene was sympathetic, nothing immediately resulted.

Among members of the New York Committee was Raynal C. Bolling, an attorney for the United States Steel Corporation and member of its committee on prevention of injury by accident. He was an able, bright young man, full of vigor, who, unfortunately, lost his life early in the World War as an aviator. Mr. Bolling's interest in the revival of the Association was secured, and in March, 1913, he accepted election as a member of its board. He played an active and effective part in the development of new plans, which made the Association, or rather its successor, under a different name, a live, going concern. The three members of the former Russell Sage Foundation Committee were also added to the board, as well as several able men who were qualified to give advice on technical subjects. Russell Sage Foundation was approached for a grant and agreed to give, in addition to its grant to the New York Committee, \$5,000 for the first year, provided that several conditions should be met—the chief one being that an executive could be engaged who was well qualified by experience and ability to successfully direct the development of the Association.

In an informal meeting, Messrs. Bolling, Van Cleve and I agreed that the Association required an income of \$15,000 and that the Rockefeller Foundation should be asked to match the grant from Russell Sage Foundation. To a formal request, the Rockefeller Foundation responded generously in May, 1914, by making a grant to the Association of \$5,000 a year for five years on condition that each year an additional \$10,000 of income should be contributed from other sources.

In 1913, the New York Committee had, by mutual consent, separated from the New York Association, whose work was confined chiefly to Greater New York, and had become independent. The directors of the National Association, when the promises of funds had been received, invited the New York Committee to become one of its standing committees. This merger was agreed to, the New

York Committee was disbanded, and its chairman and members were appointed as a standing committee of the Association, to continue work in the State of New York.

The directors of the Association also decided to abandon the title, "American Association for the Conservation of Vision," with its implications of a broadened responsibility, and to confine itself to the definite purpose of preventing blindness in accordance with original plans for the movement. With the consent of all concerned, it adopted and was incorporated under the more modest title, "National Committee for the Prevention of Blindness."

The most important problem confronting the new Committee was to find a satisfactory executive. The first choice was Mr. Van Cleve, but he could not afford to leave his posts in Ohio without more assurance than the new Committee was at the moment able to give of a permanent position and a suitable though modest salary. Then a very fortunate coincidence occurred, which took a load off the shoulders of several of us. Mr. Van Cleve was offered the position of principal of the New York Institution for the Education of the Blind. He accepted and, with the consent of the directors of the Institution, agreed to give enough time to the service of the National Committee to guide its work. He was then appointed Managing Director of the Committee, with a comparatively small compensation, with Miss Van Blarcom as Assistant Secretary in charge of work in the State of New York. Mr. Van Cleve continued with the Committee until he began to feel the effects of his hard work in 1923, when he retired. He was succeeded by Lewis H. Carris who, on Mr. Van Cleve's recommendation, had come to the National Committee in 1921 as Field Secretary.

Thus ended the painful anxiety and suspense which had depressed but had not discouraged the men who, with faith, courage, and persistence, had carried the cause through the darker days to its final establishment on a firm foundation.

I have dwelt at length on this early history of the movement because it is a stirring example of what pluck, grit, and determination can accomplish against heavy odds, and may give encouragement to others who face depressing obstacles to progress.

Let us now turn to the other side of the picture, and glance first



at the work of the New York Committee, which has been pursuing the even tenor of its way throughout this struggle with problems of national organization. Main objects of the New York Committee had been: (1) to reduce the number of cases of ophthalmia neonatorum; (2) to improve the practice of midwifery; (3) to stop the sale of wood alcohol under false names and without labels marked "Poison." In all of these phases of its work it achieved noteworthy success. Another outstanding event was publication of a report based on a study, by Miss Van Blarcom, of the English midwife laws.

In 1916, Miss Van Blarcom resigned, and Mrs. Winifred Hathaway, now Associate Director of the National Society, was appointed to succeed her as secretary of both the National and New York Committees. The latter was discontinued in 1930, when there seemed no longer any reason for keeping a special committee for New York.

There is time left to speak only briefly of the current work of the National Society in order to show how its services have increased and widened. In spite of all that has been done, we still find cases of ophthalmia neonatorum. The proportion of pupils in schools and classes for the blind whose blindness is due to this cause has been reduced from about 26 per cent in 1908 to about seven per cent in 1938. This progress, though, should, it seems to me, be greater; clearly there is still urgent need for continuous work in this connection. The Society has co-operated actively in the campaign to control syphilis; it has published and distributed literature on the subject of eye accidents in industry, and advised safety engineers and others as to means of prevention; it has backed the campaign for a safe and sane Fourth of July, chiefly by preparation of material for widespread use by radio and otherwise. It has provided for the training of medical social workers, has conducted institutes on eye health, and has provided instruction in eye health for nurses throughout the country.

In the field of education it has made special efforts to induce the provision by school authorities of sight-saving classes for pupils with defective vision. Summer courses to prepare teachers to conduct such classes have been given in universities and colleges. During 1938, 31 new sight-saving classes were inaugurated, bringing the

total number to 589. These provide normal education for some 8,000 children who because of seriously defective vision cannot hold their own in regular grades.

These items represent but a portion of the widespread activities of the staff, reaching every part of the country through correspondence, publications, slides, films, lectures, radio talks, and other educational channels.

The relations of the Society with medical, social, educational, and other agencies, both public and private, are indicated by a quotation from an address by Mr. Carris, made at the last annual meeting of the Society. Mr. Carris said:

"The National Society co-operates with the medical and social work professions and with hospitals in the development of medical social service in eye hospitals and clinics, through making possible the preparation and, in some instances, placement of trained workers on a demonstration basis; with the National Safety Council in the Society's program for the elimination of eye injuries and hazards; with the American Social Hygiene Association in the campaign to prevent visual losses from syphilis and gonorrhea; with state health departments through the Society's representation on the Committee on Conservation of Vision of the Conference of State and Provincial Health Authorities of North America, and active leadership in the program of that committee; with the federal government and other national agencies through participation in an inter-organization committee concerned with the promotion of eye health under provisions of the Social Security Act; with leaders in the nursing field in the development of a comprehensive eye health program for nurses; with other professional groups and agencies in stressing the many and varied aspects of the Society's preventive and sight conservation efforts. . ."

A noteworthy sign of the Society's success in winning the confidence and sympathy of the public is shown in its financial condition compared with that of 1908. We were glad to begin with \$5,000 and found this sum sufficient to support effective work in the State of New York. In 1938, the Society received income from contributors of over \$95,000, and from other sources of over \$31,000. Yet the total of \$126,500 was not enough by nearly \$40,000 to cover the cost of important and timely work. And it could well have



spent more for work that is much needed. (Beside the increase in its income, the Society has accumulated through legacies and a few large gifts an endowment of over \$400,000.)

We started with one person; the leading members of the staff now number fourteen, and all together, in the offices in Radio City, there are, including the staff, thirty-eight people. I can fairly say this is a splendid monument to Lewis, Schuyler, and Van Cleve, and can do no better in closing than to read a prophetic statement made by Mr. Van Cleve in the first annual report of the National Committee.

In November, 1915, Mr. Van Cleve said:

"Notable as has been the success of this movement thus far, we see before us years of unwearied effort in the hope that needless blindness may be reduced. It is ours to teach by voice and pen and picture that there may no longer be ignorance on the part of any to excuse the unnecessary loss of the power to see. It would be fatuous in us to suppose that the old law of the angel and the beast warring in the members, of which St. Paul discoursed, will be wholly abrogated by our instruction. To know is not always to do. But we shall continue to 'cry aloud, spare not, lift up the voice like a trumpet' until our message has been heard in every city and village and hamlet. To co-operation in such an inspiring service we invite all lovers and all servants of humanity."

## Prevention of Blindness—A Program \*

Dr. P. Bailliant

IT is especially auspicious to present this article by the president of the International Association for Prevention of Blindness, whose program we hope may be kept alive through these troublous times.

THE war is again making people blind. The results obtained in this field of the prevention of blindness, thanks to the finest discoveries, thanks to the repeated efforts of ophthalmologists, appear fruitless; in some parts of the world, primitive and deadly instincts will destroy in a few weeks more than whole lives dedicated to work could build up. Is this a reason, even among those who suffer, to turn away from our task and to give up the struggle? We do not think so; and if in some countries which are directly stricken the realization of the measures suggested is unavoidably delayed, they will be resumed again some day; in fact, although anxiety pervades the civilized world, many countries to-day, as they did yesterday, continue to wage the campaign against blindness.

This journal, as long as we are given the means to keep it going, will know no interruption. After ten years of existence, the International Association for Prevention of Blindness considers that its work and influence are more necessary than ever; from all quarters we are urged to carry on our task; an International Exhibition, decided at the time of the last General Assembly in London, was soon to display the results obtained and the objects to be attained. The war will postpone the date of opening, but, if we know how to use this delay, the ultimate result may be better than we had anticipated; in our present distress we should look for motives for going forward and making new progress.

\* Reprinted, by permission, from the *Journal d'Ophtalmologie Sociale*, Vol. III, No. 1, January, 1940.

One knows too well that modern warfare is one of the most dangerous causes of blindness. We need not insist further on the subject; ophthalmologists will endeavor to reduce by all possible means the number of the war blind.

### **The Ways and Means of a Campaign Against Blindness**

The following pages are chiefly intended to outline a program of action. This program has been, in part, suggested by our correspondents. Often we have been made to realize the importance of our central office, which collects new acquisitions, fruitful ideas, requests which must be taken into account.

This brief summary, in which ophthalmologists (among other readers of our *Journal*) will recognize facts and ideas with which they are familiar, will be a kind of preliminary draft of the proposed international exhibition. Those of our members who, throughout the world, may be willing to send us their ideas, their statistics, their iconographic documents, will find here, so to speak, the divisions which we are asking them to help us to fill; in the sections which we are suggesting, they will supply through their endeavors the missing links. These individual and collective efforts will build up the sum of our knowledge and means of action so that public opinion—those who know a great deal and those who know little—may better appreciate what should be done and what should be avoided. This is the path which we should follow: to enlighten public opinion, whatever its degree of education. In endeavoring to overcome certain prejudices, in conveying elementary notions to the patients who are beyond our reach, lies our most fruitful line of action.

How often in civilized countries do we meet cases of blindness which a knowledge of elementary precautions might have saved!

(A) **The Action of the Ophthalmologists.**—It is obvious that in a campaign against blindness ophthalmologists should remain in the forefront; their daily action, the invaluable discoveries which some of them have made in the field of ophthalmological science, very efficiently contribute to reduce the number of the blind. Our Association should follow up, admire and promote their work, although, in fact, the scientific orientation of the prevention of blindness is

rather the concern of local, national and international scientific societies and, first of all, of the International Council of Ophthalmology and its Congresses, which we hope will be resumed some day. The International Council realizes so well the necessity for this collaboration that it was decided that the chairman of our Association, as well as the chairman of the International League against Trachoma, would be, *de facto*, members of the Council. There, the rôle of the president of this Association mainly consists in leading towards practical issues the discussions of our colleagues, for instance, in the choice of reports. The attribution of the valued prizes awarded by the Association enables us to help those whose researches have a practical end in view, as is mostly the case with our work even when it assumes a purely speculative appearance.

It is to the ophthalmologist that we turn when we wish to find out the effects, on the visual organ, of certain social diseases, such as tuberculosis and syphilis, as well as the best methods of dealing with them.

It is again to ophthalmologists that we address our requests when, in a meeting such as our General Assembly in London in 1939, we endeavor to study the practical application in the various countries of a prophylactic measure like the Credé process. In comparing the results obtained here and there, in showing what has been achieved in other countries, these inquiries are of great value. We shall endeavor to organize other comprehensive consultations of this kind.

On the occasion of the next meeting of the International Council of Ophthalmology, the Association decided, at the request of Dr. Park Lewis, to devote its session to a study of the practical and social aspects of glaucoma; the problems of race, heredity, world distribution, treatment, etiology and pathogenesis will be dealt with by our reporters. But, while it has been the custom for the meetings of this Association to be held in connection with those of the International Ophthalmological Council, these meetings may be summoned where and when it suits the Association. This glaucoma session will take place as soon as circumstances permit. It will be remembered that on the occasion of this meeting, or during the next Ophthalmological Congress, the Association will award an honorarium of \$1,000 (kindly placed at our disposal through Dr.

Park Lewis), offered by American benefactors for the best original contribution on glaucoma.

It will be seen that besides its social action, this organization remains in close touch with the progress of ophthalmological science.

(B) **The Action of General Practitioners.**—While even in countries where there are many ophthalmologists it is often the general practitioner who is first consulted by the patient with a diseased eye or failing eyesight, there are still countries, areas and agglomerations where, owing to the absence of specialists, the patients have to apply to a general practitioner. In most cases, owing to the common sense of these physicians, catastrophes are avoided, yet they should have a minimum acquaintance with ophthalmological facts, with our recent discoveries; they should know, for instance, that to-day detachment of the retina is curable; that glaucoma is a treacherous and insidious disease; that some brain tumors which may be benign first slowly affect the eye and may be curable; that an examination of the fundus is, in many cases, the best guide to medical diagnosis. They should know that certain eyedrops, certain lotions which a clever publicity showers on them, are undoubtedly harmless, but that much precious time is lost when they are used in certain eye diseases. What better example could we mention than glaucoma? A woman is taken ill with fearful headache and sickness; her relatives are anxious and call in a doctor; the patient complains of the maximum pain in the eye which can no longer see. The symptoms of acute glaucoma are present: the eye is red, sightless, hard, the pupil dilated. If the doctor is not as familiar with the question of acute glaucoma as he is with appendicitis, in face of such headache, sickness, general discomfort, he thinks of a "cerebral congestion," of an abnormal onset of some pulmonary or other infection; he attends to the general condition and if the patient speaks of his visual trouble he replies that this will be seen to later, when the general health is better. Later is often too late. I believe that there is not an ophthalmologist who has not been called in, at a late hour, to witness some deplorable case of this kind.

Therefore the prevention of blindness demands that the general practitioner's elementary notions on ophthalmology should not be

too elementary, that he should know enough to be on his guard—to recognize acute glaucoma; to keep in mind its chronic forms; to know that in an old man, a slow and progressive loss of sight, even when painless, is not always due to a cataract which will be operated only when the sight is almost nil; to recognize the difference between irido-choroiditis and conjunctivitis; to be aware that a wound of the eye, open, apparently slight, may lead not only to the loss of the wounded, but of the opposite, eye. This is what the physicians should be taught. In all the universities medical undergraduates are following courses of ophthalmology whose conclusion is a more or less strict examination. Rather than methods of observation, which they will never use, they should be taught the elementary and practical theories to which we have just referred—the close relationship between ophthalmology and general medicine; the services which the former can render to the latter. Instead of avoiding lectures on ophthalmology they will, on the contrary, be anxious to attend them if they believe that they can thereby increase the practical knowledge which they will need.

A comprehensive inquiry should be undertaken in the various countries to find out the regions where elementary ophthalmological care is lacking; for there are areas where, for thousands of square kilometers, there are no specialists, no hospital accommodation, and those are often the very regions where eye diseases are most widespread and severe. The Association might promote the creation in these areas of mobile ophthalmological units such as those described by our Indian colleague, Dr. S. K. Mukherjee.

**(C) The Action of Public Opinion and of the Public Authorities.**—This is certainly the most difficult, the most delicate, and also the most useful, aspect of our work.

Since the early years of this century a great movement has been set up among national and international welfare societies, among governments, charitable organizations and among individuals on behalf of the campaign against certain scourges, such as tuberculosis, cancer, venereal disease. It was natural that diseases at once so widespread and so dangerous for the future generations, against which collective action is so effective, should first have claimed the attention of the public. The contagious nature of some of these scourges, the increasing frequency of others, the dread which they

inspire, were bound to attract the notice of those whose duty it is to protect and rule the public health. Leagues, dispensaries, sanatoria, hospitals, laboratories were created throughout the world. These successful achievements were greeted with enthusiasm.

The campaign against blindness has not so far attracted much attention on the part of the public authorities or of charitable societies. It was thought that this was more a matter of medicine and individual precautions than a proper object for a collective effort. In face of the army of the tuberculous, the cancerous, the syphilitic, the number of the candidates for blindness seemed negligible. On the other hand, there appeared to be no risk of contagion, no epidemics which might alarm a whole population. All say that they value vision above all other things, more than their fortune, their health, their limbs, but they are not prepared to go a long way to preserve their neighbor's eyesight. To meet a blind man fills us with pity, but the number of the blind and of the would-be blind is so small that our pity remains, in some way, a personal affair. For all these reasons the public health authorities are inclined to give blindness only the second place in their unceasing preoccupations, and this is no subject for wonder. Yet the field open to their activities is, in this sphere, unlimited, and the good seed they might sow would yield a hundredfold harvest. While the blind cannot be counted by thousands like the tuberculous, persons with diseases or wounds of the eye, in some countries, can well stand comparison with the victims of other scourges. If we take two extremes—for instance, France and Egypt—the ratio between the rate of the blind is 1 to 10, but the ratio between diseases of the eye is approximately 1 to 100. When the evil is so deeply rooted, ophthalmology can and should give directions; left to itself it is of no avail. The authorities and public opinion should be brought into play. To solicit and promote this all-powerful intervention comes within the duties of an international organization. It is in a certain measure a graceless and obscure mission, as one is seldom thankful to those who give advice and once the good work is started they get no credit for it. But it is a necessary task with unlimited possibilities which, in the end, brings forth its own reward.

Among the most efficient measures which directly or indirectly



cut off the sources of blindness we shall mention the action of the Egyptian Government which finances the upkeep of all the ophthalmological clinics; the wise immigration laws adopted by Canada to prevent cases of trachoma from entering the country; the institution of the "sanitary card" for Algerian emigrants; the laws against the transmission of hereditary diseases in Germany, in some American and Scandinavian states; finally, in the majority of civilized countries, the laws against venereal disease, against industrial injuries, those on behalf of Jennerian vaccination or of the application of the Credé process.

The prevention of eye diseases is so closely associated with the health and welfare of the people that any general measure which improves these conditions exerts a preventive effect. In this regard, the initiative of the League of Nations in summoning, in 1937, an Inter-Governmental Conference of Far Eastern Countries on rural hygiene deserves special mention; its full significance will be appreciated when it is remembered that a large number of blind in India and China owe the loss of their sight to lack of vitamins.

This brief summary will give some idea of the excellent work already done by the public authorities; of the task which still awaits them. In the present anxious circumstances, these problems may appear of secondary importance. Yet, they are the very essence of this civilization on behalf of which so many sacrifices are readily accepted. Their lasting interest should outlive the tragic but transient realities of the moment.

It would be ungrateful on our part not to acknowledge the liberality of certain governments: we receive a very substantial subsidy from the French Ministry of Health, from other governments such as Belgium, and also from such powerful organizations as the National Societies of America (their generosity is beyond praise), of Great Britain, etc.

It would be easy to show to the governmental authorities that measures against blindness are less costly than the grant of an annual pension to the blind.

Finally, we should try to enlist the interest of the public. The history of family eye diseases, the part played by heredity and contagion, the risks involved in uncorrected or badly corrected errors of refraction—this is what should be taught, to begin with, by



means of pamphlets, of simple and vivid images. To know danger is the best way to avoid it.

Industrial injuries play an outstanding part as a cause of blindness. We intend to devote a special number to this subject; it has been dealt with already at one of our meetings, in Paris, in 1930;\* the protective devices used in the various countries were emphasized. There again very simple images and graphs (in 1928, among 2,052,898 labor accidents notified to the "mairies," 700,000 were eye injuries) might be displayed to attract the attention of employers, of working men and their families to the risks and to the necessary preventive measures.

In the number of the *Journal of Social Ophthalmology* dedicated to sight-saving classes, our collaborators showed what services these classes could render with a corresponding economy for the state. The public must further be told the importance of the quality of natural and artificial lighting for the vision of the child and adult, the danger of giving children badly printed texts on cheap paper such as those which are too often used in a number of illustrated periodicals intended for young readers.

The rôle of the opticians and the free sale of correcting glasses have already been dealt with at the Congress of Madrid. Should any one, with no diploma or with a diploma too easily obtained, be entitled to select and sell a correcting glass? Should the sale of glasses, even for presbyopics, be forbidden except on presentation of a doctor's prescription, as in some countries? Should one allow, as in other countries, the development of the ill-defined class of "refractionists"? Should the presence in the optician's back room of a so-called "oculist," who is supposed to advise the patient and who most often refers him to the salesman he has met on his way, be tolerated? All these questions deserve our close attention.

Finally, the capital part played by the social worker must not be overlooked. This was the chief subject of our reports in Cairo. The countries and organizations who have adopted these valuable auxiliaries could no longer part with them.

In tropical countries, in other countries which are not distant and which are also affected with trachoma, the campaign against this scourge must be added to other duties. This task chiefly

\* Imbert Léon: *Accidents du travail*. Paris: Masson et Cie, 1939.

devolves upon the International Organization whose chairman is our learned colleague, Dr. MacCallan. The eloquent figures in his remarkable and encouraging report at our meeting in Cairo show what results can be achieved through a successful national campaign.

We hope our readers will realize that this is merely an outline of the list of subjects which deserve our attention. However far-off the results, however many and varied the obstacles in our path, we should persevere in our campaign against blindness. The International Association hopes that the National Committees, some of whom are very powerful, will help us in preparing this International Exhibition which should yield excellent results.

## Study of Prevention of Blindness from Ophthalmia Neonatorum \*

THIS report was prepared in co-operation with the National Society for the Prevention of Blindness through its consultative relationship with the Committee on Conservation of Vision of the State and Provincial Health Authorities of North America. It supplements the material published in 1939, in publication 301, under the same title.

### Sources of Information

It will be recalled that at the Conference of 1939 it was decided that the Committee on Conservation of Vision should repeat the study of ophthalmia neonatorum case records in order to obtain information which might be of assistance to health officers in strengthening their programs for the prevention of blindness due to ophthalmia neonatorum. Accordingly, the Chairman of that Committee requested that an individual record be supplied for each case reported to health officers during the year 1939. The record form used was for all practical purposes the same as that used in the previous study. (See Appendix B.)

Returns from the various health areas proved to be somewhat greater than those of the previous study, but still far from complete, as will be seen from the following brief tabulation:†

	<i>Total cases reported to health officer in 1939</i>	<i>Number of case records supplied</i>
Total.....	3,008	1,102
United States		
States.....	2,940	1,069
Territories.....	20	20
Canadian provinces.....	44	9
Newfoundland.....	4	4

Records are available for 37 per cent of total cases.

\* Reported at the 55th Annual Conference of the State and Provincial Health Authorities of North America, Washington, D. C., May 7-12, 1940.

† For detail by states see Table 1, Appendix A.

Other factors which materially affect the value of the study should be mentioned at the outset. They are:

1. The incompleteness of the information on individual case records; "not reported" ran as high as 100 per cent on certain items in the record for some health areas;
2. The fact that 59 per cent of the total records came from the State of Ohio; and
3. The known and suspected incompleteness in the reporting of cases to health authorities. The latter point warrants special attention.

#### **Incomplete Reporting of Ophthalmia Neonatorum Cases**

Reporting of cases is rather generally required by law or health department regulations. Therefore, it is not surprising that information as to the number of cases of ophthalmia neonatorum reported to the health officers in 1939 was supplied by all but three health areas. (See Table 1, Appendix A.) Replies received indicated that no cases occurred during the year in Idaho, New Orleans, Maine, Nevada, North Dakota, Oregon, Vermont, Washington, and Wyoming; in the territories of Alaska and Virgin Islands; in the provinces of Alberta, Ontario, Prince Edward Island, and Saskatchewan. This would mean that not a single case occurred among 208,185 births. It should give cause for rejoicing and members of the Committee on Conservation of Vision would wish to be among the first to offer congratulations to the health officers of those areas. If they do so only with mental reservations, it is frankly because this record seems too good to be true and possibly is not true, as some of the replies have intimated.

No attempt has been made by the Committee to test the completeness of the case reporting during 1939 in any area. However, as proof that one may be misled into a false feeling of confidence, we quote from the findings of a recent check-up in New York City. This study, which was conducted by a student in ophthalmology and had the approval of the departments of health and hospitals, covered the six-year period from 1931-1936 and was confined to a limited group of hospitals accounting for only 31 per cent of the total births in the city. The most significant findings are:

1. That, although only 23 cases had previously been reported to the Department of Health for the entire city, the investigation turned up 1,344 cases among 192,478 births (or a rate of about 7 per 1,000 live births)
2. That, among these were 141 gonorrheal cases (or a rate of .73 per 1,000 live births)
3. That eleven of the gonorrheal cases, as well as three cases of chemical origin, ended in some degree of impaired vision.

This study further disclosed inadequate recording of cases in some of the hospital record files, and this inadequacy affected the completeness in the special study. For example, it was noted that the group of hospitals able to supply data on types of ophthalmia neonatorum other than gonorrheal also showed a higher gonorrheal case rate (1.05 per 1,000 live births). (For further information see Table B in Appendix.)

Additional evidence that cases of ophthalmia neonatorum can be found if attention is focussed on this subject is shown in the figures for the District of Columbia which had recorded only 9 cases reported in 1937, had 26 cases reported in 1939 and still specified the latter figure to be incomplete. Also, in New Jersey the number of cases reported yearly has risen gradually from 23 in 1935 to 168 in 1939.

If the frequency rates of the special study mentioned above are compared with those shown in our own study as given in Table 1, Appendix A, it will be noted that in most health areas the rate falls far below the revised rate for New York City for the years 1931-36. Outstanding exceptions are: Baltimore, Boston, and the remainder of Massachusetts where the rates seem excessively high (36.90, 25.60 and 11.85, respectively). The total cases reported give a rate of 1.32 per 1,000 live births for continental United States, 0.27 for the Territories and 0.20 for Canada. However, a glance at the details of the tabulations shows that few areas report more than their gonorrheal cases and even the gonorrheal figures are incomplete, as some of these cases are undoubtedly lost among those for which the cause is "not reported." The extent to which poor reporting invalidates the total figure in any area is unknown to the

members of the Committee and probably to the executive health officers of some areas.

On the whole it would appear that the procedure for reporting of cases may be falling into disuse, now that physicians, midwives, and the general public are presumably educated to the importance of using prophylactics and securing prompt medical treatment. The result is that health authorities are no longer aware of the extent of the problem.

### **Blindness from Ophthalmia Neonatorum**

The subject of suspected incompleteness of the figures cannot be left without calling attention once more to the fact that the most recent figures on causes of blindness among new pupils entering schools for the blind indicate that as late as six to seven years ago 65 to 70 new cases of blindness due to ophthalmia neonatorum were being added to the rolls of the blind yearly in the United States. In this connection it is important to note that at that time the total number of cases reported to health officers was approximately the same as the total reported during 1939.

The percentage of new pupils whose blindness was due to this cause was 6.7 per cent\* in 1938-39, as compared with rates varying from 6.5 per cent to 9.1 per cent in the previous five years, and 28.2 per cent as of 1906-07 when public health authorities first undertook an ophthalmia neonatorum control program.

### **Impaired Vision from Ophthalmia Neonatorum**

The present study of ophthalmia neonatorum case records reveals 20 cases in which there was some evidence of a permanent defect in one or both eyes. Of course, the figure 20 is probably not the true total of cases of impaired vision, since information on this point is missing for 2,002 of the total 3,008 cases reported and the figure should be further adjusted to allow for poor reporting of cases. Based on the number of cases for which information regarding eye condition at completion of treatment was reported, we arrive at an apparent visual impairment rate of approximately

\* This figure is tentative, as reports are not yet available for all schools.

2 per cent of the cases occurring. Thus the actual number of cases of impaired vision may prove to be at least 60.

One section on the record form called for a statement concerning the degree of impairment of vision. As may be seen from the following table, only a few cases were designated as blind in one or both eyes. However, our experience leads us to believe that an impairment that is sufficient to warrant education in a braille class would not ordinarily be designated as blind, since the average observer thinks of blindness as equivalent only to absolute blindness.

	<i>Number of cases*</i>
Both eyes affected	
Blind.....	2
Vision impaired.....	9
Blind in one eye, vision impaired in other eye. . .	1
One eye affected	
Blind.....	1
Vision impaired.....	7
Total.....	20

### Use of Prophylactics at Birth

Since great reliance is placed upon the use of a prophylactic at birth it is of interest to note the distribution of cases by type of prophylactic used. (See Table 2, Appendix A, for details.) No prophylactic was used in 46 (4 per cent) of the cases and no information was available in 109 (10 per cent) more. On the other hand, in 79 per cent silver nitrate (usually 1 per cent strength) had been used, and in 7 per cent some other drug had been substituted. Once again we are forced to conclude that a single application of the prophylactic drug is not the only item to be stressed in the ophthalmia neonatorum prevention program.

### Attendant at Birth

It was of interest to determine the rate of occurrence of ophthalmia neonatorum cases among births attended by physicians, midwives and others, at least for continental United States for which basic information on distribution of total live births by type of

\* These cases have been identified by health area in most of the appendix tables. See figures in parenthesis.



attendant is available. Because rates computed from the small sample of cases included in this study would obviously be an understatement, the two sets of percentages are presented separately for comparison.

<i>Type of attendance at birth</i>	<i>Per cent of total live births in the U. S.</i>	<i>Per cent of total ophthalmia neo- natorum cases studied (U. S.)</i>
Physician in hospital.....	48.0	32.9
Physician in home.....	41.8	56.4
Midwife.....	9.5	6.0
Other.....	0.6	4.7
Total.....	100.0	100.0

From the fact that both hospitals and midwives account for a smaller percentage of the ophthalmia neonatorum cases than would be expected from the distribution of total live births, it is presumed that the physician in the hospital and the midwife are more successful than is the physician in the home, in preventing ophthalmia neonatorum. As might be expected, the infants who fare worst are those attended by relatives and other unqualified persons, but fortunately this group is quite small.

#### Factors Affecting General Health at Birth

Ophthalmologists frequently mention the effect on both the incidence of ophthalmia neonatorum and the outcome of its treatment of complicating factors, such as gonorrhea in the mother, prematurity, malnutrition and multiple births. An attempt was made in this study to gather data on these points. As will be noted in Table 4, Appendix A, such information proved to be rather generally unavailable. Hence there is nothing definite to report except perhaps the fact that impaired vision appears to occur somewhat more often among the malnourished group (3 out of 31 cases).

#### Delay in Reporting Cases

In addition to incompleteness in the reporting of cases occurring, the health officer is confronted with the problem of delayed reporting. By computing the interval that had elapsed between the date on which symptoms were first noted and the date the case was reported to the health officer for each case in which the dates were

given, we found that only 26 per cent were reported immediately, i. e., on the date of occurrence; by the end of the second day, 58 per cent had been reported. Altogether 79 per cent had been reported under one week, while 11 per cent were not reported until the second week, 4 per cent in the third week, 2 per cent in the fourth week and 4 per cent were reported only after four weeks had elapsed. (See Table 5, Appendix A, for details.) Since the dates reported were not given for a large number of the cases ending in impaired vision it is impossible to state positively the effect of the delay in reporting cases to the health officer.

#### **Delay in Bringing Case Under Care**

Apparently much less delay occurs in bringing the baby under care than in reporting to the health officer. Table 6, Appendix A, shows that 43 per cent had been brought under care before the end of the day on which symptoms were noted, 72 per cent at the end of two days, and 85 per cent within a week.

It would be gratifying to be able to report that only the cases in which medical care was delayed were responsible for unfavorable outcome after treatment. Unfortunately, this does not appear to be entirely true, as the cases receiving prompt care on the day of occurrence accounted also for 9 of the 20 cases of impaired vision.

#### **Interval Between Date of Birth and Date Symptoms Noted**

Figures on the time that elapsed between the date of birth and the date on which symptoms were first noted are probably influenced by the fact that in most health areas the law or regulation on reporting includes in the definition of an ophthalmia neonatorum case, a time limit of two weeks. Also, the few cases received which showed infections occurring two or more months after birth, were deliberately excluded in order to confine the counts to a comparable group. However, approximately 8 per cent of the gonorrheal cases and 3 per cent of the others were not noted until after two weeks of age or more. (See Table 7, Appendix A, for further details.) It appears that this may indicate the necessity for increasing the age limit. Apparently this is the judgment also of the Department of Health in the State of New York, since that state's regulation has

recently been revised to include cases occurring within 21 days of birth.

### **Laboratory Diagnosis**

It is gratifying to find in the records evidence of appreciation of the importance of obtaining laboratory diagnosis as a basis for treatment. Only 12 per cent of the 1,102 cases failed to have this service.

### **Medical and Nursing Care**

The advantages of hospitalization and of having the medical care directed by an ophthalmologist are well known. In the group of cases studied 14 per cent had both of these advantages, while an additional 24 per cent were hospitalized and an additional 2 per cent had care in the home under the direction of an ophthalmologist. It is quite possible that specialist service, being concentrated in the larger cities, is not accessible for the average case. Of the remaining cases cared for in the home, 366, or 33 per cent of the total, were under the care of a general physician and 224, or 20 per cent, had special nursing care presumably under the supervision of the health officer. Type of care was not reported for 7 per cent of the cases. (See Table 8, Appendix A, for further details.)

It seems only fair to note also the advantages of good nursing care. Among the 266 cases specified only as having had special nursing care, not a single case of impaired vision occurred.

### **Duration of Medical Care**

As will be seen in the table on duration of medical care (Table 9, Appendix A), there is a wide variation in the length of treatment for individual cases. While some were apparently cleared up within a few days, others required medical supervision for a period of months. Why this should be so, it is impossible to state. However, the bulk of the cases required medical care for a period of one to three weeks, the median being 14 days for the gonorrheal cases and 15 days for the non-gonorrheal.

### Drugs Used in Treatment

Recent reports in medical literature have pointed to the success achieved with the use of sulfanilamide in treatment of ophthalmia neonatorum, particularly cases due to gonorrheal infection. For this reason an attempt was made to analyze cases by type of drug used. Unfortunately this information was missing from two-thirds of the records, and only indefinitely specified in many others. However, the figures show that sulfanilamide or its derivatives was used in 177 cases, and that the average period of treatment was 13 days for the cases in which its use was mentioned, as compared with 16 days for all other cases. Unfortunately, the records do not prove the superiority of this treatment over other types, since six cases resulted in impaired vision.

### Recommendations

The attempt to make a detailed analysis of all cases of ophthalmia neonatorum occurring in 1939 fell short of the expectations of the Committee on Conservation of Vision, because information requested proved to be not generally available to health officers. Of the 3,008 cases which had been reported to health authorities during the year, only 1,102 case records were available for study, and not all of these gave complete information on all points.

Official records would appear to indicate a very low incidence of cases of ophthalmia neonatorum. The average for all health areas was 1.19 per 1,000 live births, and the rate for a considerable number of areas was either zero or practically negligible. However, the Committee believes it has evidence that reporting of cases may be quite incomplete. The Committee on Conservation of Vision recommends that during the next few years each state and provincial health authority work within his own area to *make certain that reporting of cases is complete*.

Again, the official records turned up only 20 cases of infants with impaired vision due to ophthalmia neonatorum, but, since records on this point were available for not more than one-third of the cases reported, it seems likely that the true total among cases reported is at least 60, and presumably even this figure is underestimated because of poor reporting. On this point the Committee

recommends that health authorities make it a routine practice to *request an adequate case record on each reported case*, this record to include among essential facts a statement of the final outcome of the case in terms of degree of impaired vision.

The case records apparently indicated only a few cases of blindness (2 blind in both eyes and 1 in one eye). However, some of the infants reported as having impaired vision may prove to be candidates for a school for the blind when they are old enough to have a satisfactory vision test.

Although it is impossible, because of incompleteness of the records, to state definitely whether or not delay in reporting of cases to the health officer is a factor which has influenced the ultimate outcome of the cases having unfavorable results, there is evidence of considerable delay in reporting of cases. This might be investigated in connection with attempts to improve completeness of the reporting.

Many cases of severe ophthalmia similar in all respects to those occurring within the usual two-week limit were sent to the Committee for study. It would appear, therefore, that there is reason to increase the time limit, possibly to include all cases occurring within the first year of life.

Once again the Committee would urge that health officers assume responsibility for seeing that infants with impaired vision are placed under ophthalmological care for further corrective treatment, when this is possible, and that those with a visual defect sufficient to warrant training as handicapped children are referred for such training.

Finally the Committee on Conservation of Vision suggests that further study of ophthalmia neonatorum case records by the Committee be postponed for a period of three to five years during which time health authorities in each health area should endeavor to improve case reporting.

## Appendix A

Table 1.—Reporting of Ophthalmia Neonatorum Cases—1939

OPHTHALMIA NEONATORUM CASES REPORTED

Health area	Live births	Total reported	Rate per 1,000 live births	Type of case				Case records received for study
				G.C.	Other organisms	Chemical irritation	Not reported	
States								
Alabama.....	62,032	12	.19	8*	..	..	4	12
Arizona.....	10,878	24	2.21	7*	..	..	17	8
Arkansas.....	37,182	9	.24	4	1	..	4	7
California.....	101,844	16	.16	14*	..	..	2	15
Colorado.....	20,599	5	.24	4*	..	..	1	4
Connecticut..	23,783	2	.08	2	0	0	0	2
Delaware.....	4,431	4	.91	1*	..	..	3	4
Dist. of Col..	12,938	26	2.01	12*	8	..	6	26
Florida.....	31,096	3	.10	2	..	..	1	3
Georgia.....	64,636	2	.03	..	..	..	2	0
Idaho.....	11,277	0	.00	0	0	0	0	0
Illinois (except Chicago).....	70,902	10	.14	4	..	..	6	7
Chicago.....	51,660	24	.46	24*	0	0	0	24
Indiana.....	60,192	9	.15	7*	..	..	2	9
Iowa.....	43,221	4	.09	4	0	0	0	4
Kansas.....	29,574	2	.07	..	..	..	2	0
Kentucky (ex. Louisville).....	55,746	..	..	..	..	..	..	..
Louisville..	6,132	41	6.70	41	0	0	0	41
Louisiana (ex. New Orleans).....	38,583	2	.05	2	0	0	0	2
New Orleans..	10,284	0	.00	0	0	0	0	0
Maine.....	15,218	0	.00	0	0	0	0	0
Maryland (ex. Baltimore).....	13,714	8	.57	3	..	..	5	6
Baltimore..	15,299	564	36.90	22	(542)†	..	0	0
Mass. (except Boston).....	45,350	536	11.85	5	(531)†	..	0	5
Boston.....	15,912	406	25.60	..	..	..	406	0
Michigan.....	96,963	8	.08	7	..	..	1	8
Minnesota....	50,062	5	.10	4	..	..	1	5
Mississippi....	53,694	54	1.00	48	..	..	6	54
Missouri.....	58,567	1	.02	1	0	0	0	1
Montana.....	10,673	4	.38	4	0	0	0	4
Nebraska.....	22,401	1	.04	..	..	..	1	0
Nevada.....	1,888	0	.00	0	0	0	0	0
New Hamp....	7,830	1	.13	..	..	..	1	0
New Jersey....	56,043	168	3.00	..	..	..	168	0
New Mexico....	14,290	6	.42	..	..	..	6	0
New York (ex. N.Y. City).....	87,640	76	.87	21*	22	7	26	76
N. Y. City....	101,919	33	.32	27	1	..	5	33
No. Carolina..	79,934	19	.24	..	..	..	19	0
North Dakota..	13,041	0	.00	0	0	0	0	0
Ohio (1938)...	112,667	674	5.96	24	(626)†	..	0	650

\* Includes indefinitely diagnosed cases, which are probably gonorrheal.

† Includes other organisms and chemical irritations.

Table 1.—Reporting of Ophthalmia Neonatorum Cases—1939—Continued  
OPHTHALMIA NEONATORUM CASES REPORTED

Health area	Live births	Total reported	Rate per 1,000 live births	Type of case				Case records received for study
				G.C.	Other organisms	Chemical irritation	Not reported	
States								
Oklahoma....	44,188	7	.16	..	..	..	7	0
Oregon.....	16,245	0	.00	0	0	0	0	0
Pennsylvania..	165,984	38	.23	..	..	..	38	0
Rhode Island..	10,536	4	.38	2	..	..	2	4
South Carolina	41,120	53	1.29	..	..	..	53	0
South Dakota..	11,826	1	.08	..	..	..	1	0
Tennessee....	53,651	34	.63	29	..	..	5	34
Texas.....	121,156	28	.23	4	1	..	23	5
Utah.....	13,214	1	.08	1	0	0	0	1
Vermont.....	6,301	0	.00	0	0	0	0	0
Virginia.....	53,495	5	.09	4*	..	..	1	5
Washington...	26,767	0	.00	0	0	0	0	0
West Virginia..	42,434	8	.19	8*	0	0	0	8
Wisconsin....	55,004	2	.04	2	0	0	0	2
Wyoming.....	4,496	0	.00	0	0	0	0	0
Sub-total...	2,231,216‡	2,940	1.32	352	33 (1699)†	7	825	1,069
Territories								
Alaska.....	..	0	.00	0	0	0	0	0
Canal Zone ..	490	1	2.04	1	0	0	0	1
Hawaii.....	9,062	1	.11	1	0	0	0	1
Philippines...	513,760	..	..	..	..	..	..	..
Puerto Rico...	64,163	18	.28	16*	1	..	1	18
Virgin Islands.	703	0	.00	0	0	0	0	0
Sub-total ..	74,418‡	20	.27	18	1	..	1	20
Provinces								
Alberta.....	15,881	0	.00	0	0	0	0	0
Brit. Col. ....	12,438	3	.24	1	..	..	2	3
Manitoba....	13,478	1	.07	1	0	0	0	1
New Bruns....	11,418	..	..	..	..	..	..	..
Nova Scotia...	12,189	5	.41	4	..	..	1	5
Ontario.....	65,501	0	.00	0	0	0	0	0
Pr. Ed. Is. ....	1,971	0	.00	0	0	0	0	0
Quebec.....	78,145	35	.45	..	..	..	35	0
Saskatchewan.	18,162	0	.00	0	0	0	0	0
Sub-total...	217,765‡	44	.20	6	..	..	38	9
Newfound....	§	4	§	..	..	..	4	4
Sub-total....	§	4	§	..	..	..	4	4
Total.....	2,523,399‡	3,008	1.19	376	34 (1699)†	7	868	1,102

\* Includes indefinitely diagnosed cases, which are probably gonorrheal.

† Includes other organisms and chemical irritations.

‡ Excludes health areas not reporting.

§ Live births not available.



Table 2.—Analysis of Ophthalmia Neonatorum Cases by Type of Prophylaxis Used at Birth

Health area	Prophylactic used						Total case records, 1939
	AgNO <sub>3</sub>		Other		None	Not reported	
	1%	Other	No.	Type specified			
States							
Alabama.....	3	1 (2%) (1)	3	Neo silvol 10, 4%	4 (1)	1	12 (2)
Arizona.....	1	1 (2%)	1	Argyrol 5% (daily)	4	1	8
Arkansas.....	4	0	0		2	1	7
California.....	4 (1)	3 (2, ?%)	1	Argyrol ?%	0	7 (1)	15 (2)
Colorado.....	1 (1)	1 (2%) (1)	0		1	1 (1)	4 (3)
Connecticut...	1	0	1	Argyrol 10%	0	0	2
Delaware.....	4	0	0		0	0	4
Dist. of Col...	3	10 (?%)	0		0	13 (1)	26 (1)
Florida.....	2	0	0		0	1	3
Illinois.....	26	3 (?%) (2)	0		0	2	31 (2)
Indiana.....	6	0	1	Argyrol 10%	0	2	9
Iowa.....	0	2 (?%)	0		0	2	4
Kentucky*....	0	2 (?%)	0		0	39	41
Louisiana.....	1	0	0		1	0	2
Maryland....	3	0	0		2	1	6
Massachusetts	5	0	0		0	0	5
Michigan.....	1	5 (1½, ?%)	0		1 (1)	1	8 (1)
Minnesota....	1	2 (?%)	0		0	2	5
Mississippi....	38 (1)	4 (2, ?%)	0		5	7	54 (1)
Missouri.....	0	0	0		1	0	1
Montana.....	1	1 (2%) (1)	0		1	1	4 (1)
N. Y. S. (ex. N. Y. C.....	46	21 (2, ?%)	9	Argyrol 25, 20%; silvol 20%; colsar- gen; argant nitric	0	0	76
N. Y. C.....	21	0	0		1	11	33
Ohio†.....	592 (1)	4 (½%)	43 (1)	Argyrol 25, 20, 15, 2, ?%; mild sil- ver protein; boric acid; neo silvol 20 %; cargentos 10%; "brown drops"	4	7	650 (2)
Rhode Island.	0	1 (?%)	1	Zinc sulphate	0	2	4
Tennessee....	16	2 (?%)	9	Argyrol 15%	5	2	34

NOTES: Figures in parenthesis show number of cases resulting in impaired vision.

Excludes health areas in which no cases of ophthalmia neonatorum were reported and those from which no case records are available.

\* Louisville cases only.

† 1938 cases.

Table 2.—Analysis of Ophthalmia Neonatorum Cases by Type of Prophylaxis Used at Birth—Continued

Health area	Prophylactic used					Total case records, 1939	
	AgNO <sub>3</sub>		Other		None		Not reported
	1%	Other	No.	Type specified			
States							
Texas.....	1	0	1	Merthiate	2	1 (1)	5 (1)
Utah.....	1	0	0		0	0	1
Virginia.....	4 (1)	0	0		1	0	5 (1)
West Virginia..	1	1 (2%)	0		5 (1)	1	8 (1)
Wisconsin....	0	0	0		2	0	2
Sub-total...	787 (5)	64 (5)	70 (1)		42 (3)	106 (4)	1,069 (18)
Territories							
Canal Zone...	1 (1)	0	0	Argyrol 5%	0	0	1 (1)
Hawaii.....	1	0	0		0	0	1
Puerto Rico...	8	1 (7%) (1)	4		3	2	18 (1)
Sub-total...	10 (1)	1 (1)	4		3	2	20 (2)
Provinces							
Brit. Col.....	2	0	1	Argyrol 10%	0	0	3
Manitoba....	0	0	0	Argyrol 20, 10%	0	1	1
Nova Scotia...	2	0	3		0	0	5
Sub-total...	4	0	4		0	1	9
Newfoundland	1	0	2	Argyrol 5, 7%	1	0	4
Sub-total...	1	0	2		1	0	4
Total.....	802 (6)	65 (6)	80 (1)		46 (3)	109 (4)	1,102 (20)

NOTES: Figures in parenthesis show number of cases resulting in impaired vision.

Excludes health areas in which no cases of ophthalmia neonatorum were reported and those from which no case records are available.

Table 3.—Analysis of Ophthalmia Neonatorum Cases by Type of Attendance at Birth

Health area	Attendant at birth				Not reported	Total case records, 1939
	Physician in		Midwife	Other		
	Hospital	Home				
<i>States</i>						
Alabama.....	1	7 (1)	3 (1)	0	1	12 (2)
Arizona.....	1	2	0	5	0	8
Arkansas.....	0	5	1	1	0	7
California.....	9 (1)	0	1	1	4 (1)	15 (2)
Colorado.....	0	3 (3)	0	1	0	4 (3)
Connecticut.....	0	2	0	0	0	2
Delaware.....	0	0	1	0	3	4
District of Columbia..	21	5 (1)	0	0	0	26 (1)
Florida.....	2	0	1	0	0	3
Illinois.....	24 (1)	7 (1)	0	0	0	31 (2)
Indiana.....	6	1	0	0	2	9
Iowa.....	1	1	0	1	1	4
Kentucky*.....	31	9	0	0	1	41
Louisiana.....	0	0	1	1	0	2
Maryland.....	1	2	3	0	0	6
Massachusetts.....	4	1	0	0	0	5
Michigan.....	4	3	1 (1)	0	0	8 (1)
Minnesota.....	3	1	0	1	0	5
Mississippi.....	1	12	38 (1)	3	0	54 (1)
Missouri.....	0	1	0	0	0	1
Montana.....	2 (1)	0	0	1	1	4 (1)
New York State (excl. New York City)	47	25	3	1	0	76
New York City..	20	3	2	1	7	33
Ohio†.....	155 (1)	490 (1)	2	0	3	650 (2)
Rhode Island.....	3	1	0	0	0	4
Tennessee.....	13	14	2	5	0	34
Texas.....	0	3	2 (1)	0	0	5 (1)
Utah.....	0	1	0	0	0	1
Virginia.....	2	0	2 (1)	1	0	5 (1)
West Virginia.....	0	3	1	4 (1)	0	8 (1)
Wisconsin.....	0	1	0	0	1	2
Sub-total.....	351 (4)	603 (7)	64 (5)	27 (1)	24 (1)	1,069 (18)
<i>Territories</i>						
Canal Zone.....	1 (1)	0	0	0	0	1 (1)
Hawaii.....	1	0	0	0	0	1
Puerto Rico.....	7	0	9	2 (1)	0	18 (1)
Sub-total.....	9 (1)	0	9	2 (1)	0	20 (2)
<i>Provinces</i>						
British Columbia....	2	1	0	0	0	3
Manitoba.....	0	0	0	1	0	1
Nova Scotia.....	3	2	0	0	0	5
Sub-total.....	5	3	0	1	0	9
Newfoundland.....	1	0	1	2	0	4
Sub-total.....	1	0	1	2	0	4
Total.....	366 (5)	606 (7)	74 (5)	32 (2)	24 (1)	1,102 (20)

NOTES: Figures in parenthesis show number of cases resulting in impaired vision.

Excludes health areas in which no cases of ophthalmia neonatorum were reported and those from which no case records are available.

\* Louisville cases only.

† 1938 cases.

Table 4.—Analysis of Ophthalmia Neonatorum Cases by Factors Influencing General Health Status at Birth

Health area	Prematurity			Malnutrition			Multiple birth			Infection in mother			Total case records, 1939
	Yes	No	N.R.	Yes	No	N.R.	Yes	No	N.R.	G.C.	Other	Unknown	
States													
Alabama...	1	11 (2)	0	5 (1)	7 (1)	0	0	12 (2)	0	1	0	11 (2)	12 (2)
Arizona...	0	6	2	2	4	2	0	6	2	3	0	5	8
Arkansas...	0	7	0	1	4	2	0	7	0	2	0	5	7
California...	4 (1)	10 (1)	1	1	7 (1)	7 (1)	0	11 (1)	4 (1)	1	0	14 (2)	15 (2)
Colorado...	0	3 (2)	1 (1)	0	3 (2)	1 (1)	0	3 (2)	1 (1)	2 (1)	0	2 (2)	4 (3)
Conn.....	0	2	0	0	2	0	0	2	0	0	0	2	2
Delaware...	0	0	4	0	0	4	0	0	4	0	0	4	4
D. C.....	3	3	20 (1)	0	2	24 (1)	0	2	24 (1)	0	0	26 (1)	26 (1)
Florida...	0	3	0	0	3	0	0	2	1	1	0	2	3
Illinois...	8	23 (2)	0	1	6 (2)	24	0	28 (2)	3	3	2 (1)	26 (1)	31 (2)
Indiana...	1	5	3	2	4	3	0	6	3	0	0	9	9
Iowa...	1	1	2	0	1	3	0	1	3	1	0	3	4
Kentucky*	2	37	2	0	36	5	0	36	5	1	0	40	41
Louisiana...	0	2	0	0	2	0	0	2	0	0	0	2	2
Maryland...	2	4	0	0	5	1	0	6	0	0	0	6	6
Mass.....	2	3	0	0	5	0	0	5	0	1	0	4	5
Michigan...	2	4	2 (1)	0	5	3 (1)	0	8 (1)	0	0	0	8 (1)	8 (1)
Minnesota...	1	3	1	2	1	2	0	4	1	1	0	4	5
Mississippi...	5	43 (1)	6	5	36 (1)	13	0	43 (1)	11	5	1	48 (1)	54 (1)
Missouri...	0	1	0	0	1	0	0	0	1	1	0	0	1
Montana...	0	4 (1)	0	0	4 (1)	0	0	4 (1)	0	1 (1)	0	3	4 (1)
N.Y.S. (ex. N. Y. C.)	4	71	1	0	0	76	0	0	76	6	5	65	76
N. Y. C.	8	22	3	2	25	6	1	28	4	5	0	28	33
Ohio†...	0	0	650 (2)	0	0	650 (2)	0	0	650 (2)	0	0	650 (2)	650 (2)
R. I.....	0	0	4	0	0	4	0	0	4	0	0	4	4
Tennessee...	1	32	1	1	14	19	2	30	2	2	2	30	34
Texas.....	0	5 (1)	0	2 (1)	3	0	1	3 (1)	1	2 (1)	0	3	5 (1)
Utah.....	0	1	0	1	0	0	0	0	1	1	0	0	1
Virginia...	0	5 (1)	0	0	0	5 (1)	1	4 (1)	0	0	0	5 (1)	5 (1)
W. Va.....	1	7 (1)	0	3 (1)	4	1	0	7 (1)	1	0	0	8 (1)	8 (1)
Wisconsin...	0	0	2	0	0	2	0	0	2	1	0	1	2
Sub-total	46 (1)	318 (12)	705 (5)	28 (3)	184 (8)	857 (7)	5	260 (13)	804 (5)	39 (3)	13 (1)	1,017 (14)	1,069 (18)
Territories													
Canal Zone	0	1 (1)	0	0	1 (1)	0	0	1 (1)	0	0	0	1 (1)	1
Hawaii....	1	0	0	0	1	0	0	1	0	1	0	0	1
P. R.....	2	14 (1)	2	2	15 (1)	1	0	15 (1)	3	8	1	9 (1)	18
Sub-total	3	15 (2)	2	2	17 (2)	1	0	17 (2)	3	9	1	10 (2)	20 (2)
Provinces													
Brit. Col.	0	3	0	1	2	0	0	3	0	0	0	3	3
Manitoba...	0	0	1	0	0	1	0	1	0	1	0	0	1
Nov. Scot.	1	3	1	0	3	2	0	4	1	1	0	4	5
Sub-total	1	6	2	1	5	3	0	8	1	2	0	7	9
Newfound.	0	3	1	0	3	1	0	3	1	0	0	4	4
Sub-total	0	3	1	0	3	1	0	3	1	0	0	4	4
Total.....	50 (1)	342 (14)	710 (5)	31 (3)	209 (10)	862 (7)	5	288 (15)	809 (5)	50 (3)	14 (1)	1,038 (16)	1,102 (20)

NOTES: Figures in parenthesis show number of cases resulting in impaired vision.

Excludes health areas in which no cases of ophthalmia neonatorum were reported and those from which no case records are available.

N.R.—not reported.

\* Louisville cases only.

† 1938 cases only.

Table 5.—Analysis of Ophthalmia Neonatorum Cases by Interval Between Date Symptoms were First Noted and Date Reported to Health Officer

Health area	Interval between date symptoms first noted and date reported to health officer (in days)								Total cases reported, 1939
	Under 1	1 to 2	3 to 6	7 to 13	14 to 20	21 to 27	28 and more	N.R.	
<i>States</i>									
Alabama.....	0	2	3 (1)	2	3	0	0	2 (1)	12 (2)
Arizona.....	0	0	2	3	1	1	0	1	8
Arkansas.....	2	1	1	1	0	0	1	1	7
California.....	2	3	3	0	0	1	1	5 (2)	15 (2)
Colorado.....	0	1 (1)	0	0	0	0	0	3 (2)	4 (3)
Connecticut...	0	0	1	1	0	0	0	0	2
Delaware.....	1	1	0	2	0	0	0	0	4
Dist. of Col....	0	0	1	0	0	0	0	25 (1)	26 (1)
Florida.....	0	0	1	0	0	0	1	1	3
Illinois.....	4	8	7	5	2	0	0	5 (2)	31 (2)
Indiana.....	1	0	0	0	0	0	0	8	9
Iowa.....	0	1	1	0	0	0	0	2	4
Kentucky*....	10	1	0	0	0	0	0	30	41
Louisiana.....	0	0	1	0	0	0	0	1	2
Maryland.....	1	1	0	0	0	1	1	2	6
Massachusetts..	0	1	3	0	0	0	0	1	5
Michigan.....	2	2	1	0	1 (1)	0	0	2	8 (1)
Minnesota.....	0	1	0	1	0	0	2	1	5
Mississippi.....	16	7	12	5	1	2	4 (1)	7	54 (1)
Missouri.....	0	0	0	0	0	0	1	0	1
Montana.....	2	2 (1)	0	0	0	0	0	0	4 (1)
N. Y. State (ex. N. Y. City)	9	14	15	17	10	2	5	4	76
N. Y. City.....	2	6	3	9	2	1	7	3	33
Ohio†.....	196 (1)	240	124	48	15 (1)	9	9	9	650 (2)
Rhode Island...	0	0	0	1	0	0	0	3	4
Tennessee.....	1	8	13	5	4	2	0	1	34
Texas.....	1	0	0	0	0	0	0	4 (1)	5 (1)
Utah.....	0	1	0	0	0	0	0	0	1
Virginia.....	0	0	0	1	1	0	1 (1)	2	5 (1)
West Virginia..	2 (1)	0	3	0	2	0	1	0	8 (1)
Wisconsin.....	0	0	0	0	0	0	0	2	2
Sub-total....	252 (2)	301 (2)	195 (1)	101	42 (2)	19	34 (2)	125 (9)	1,069 (18)
<i>Territories</i>									
Canal Zone...	0	0	0	1 (1)	0	0	0	0	1 (1)
Hawaii.....	0	1	0	0	0	0	0	0	1
Puerto Rico...	3	2	6 (1)	4	1	1	1	0	18 (1)
Sub-total...	3	3	6 (1)	5 (1)	1	1	1	0	20 (2)
<i>Provinces</i>									
Brit. Columbia	0	0	1	1	0	0	0	1	3
Manitoba.....	0	0	1	0	0	0	0	0	1
Nova Scotia...	0	1	0	0	0	0	0	4	5
Sub-total...	0	1	2	1	0	0	0	5	9
Newfoundland	2	1	0	0	0	0	1	0	4
Sub-total...	2	1	0	0	0	0	1	0	4
Total.....	257 (2)	306 (2)	203 (2)	107 (1)	43 (2)	20	36 (2)	130 (9)	1,102 (20)

NOTES: Figures in parenthesis show number of cases resulting in impaired vision.

Excludes health areas in which no cases of ophthalmia neonatorum were reported and those from which no case records are available.

N.R.—Not reported.

\* Louisville cases only.

† 1938 cases.

Table 6.—Analysis of Ophthalmia Neonatorum Cases by Interval Between Date Symptoms were First Noted and Date Infant was Brought Under Medical Care

Health area	Interval between date symptoms first noted and date infant brought under medical care (in days)								Total cases reported, 1939
	Under 1	1 to 2	3 to 6	7 to 13	14 to 20	21 to 27	28 and more	N.R.	
<i>States</i>									
Alabama.....	7 (1)	3 (1)	0	0	0	0	0	2	12 (2)
Arizona.....	3	1	2	2	0	0	0	0	8
Arkansas.....	4	0	1	0	0	0	1	1	7
California.....	8	1	1	1 (1)	1	1	0	2 (1)	15 (2)
Colorado.....	1 (1)	0	1	1 (1)	0	0	0	1 (1)	4 (3)
Connecticut...	1	0	0	1	0	0	0	0	2
Delaware.....	2	0	0	2	0	0	0	0	4
Dist. of Col....	16	0	4	2	1 (1)	0	1	2	26 (1)
Florida.....	1	0	2	0	0	0	0	0	3
Illinois.....	22	3	1	1	1	0	0	3 (2)	31 (2)
Indiana.....	5	2	0	0	0	0	0	2	9
Iowa.....	1	0	1	0	0	0	0	2	4
Kentucky*....	26	8	1	5	0	0	0	1	41
Louisiana.....	0	0	0	1	0	0	0	1	2
Maryland.....	2	1	0	0	0	1	1	1	6
Massachusetts.	3	2	0	0	0	0	0	0	5
Michigan.....	3	2	1	0	1 (1)	0	0	1	8 (1)
Minnesota.....	2	1	1	0	0	0	1	0	5
Mississippi.....	4	12	10	12	3	0	3 (1)	10	54 (1)
Missouri.....	0	0	0	0	1	0	0	0	1
Montana.....	4 (1)	0	0	0	0	0	0	0	4 (1)
N. Y. State (ex. N. Y. City)	39	17	10	3	3	1	2	1	76
N. Y. City.....	23	4	1	2	0	0	0	3	33
Ohio†.....	234 (2)	225	100	46	15	5	10	15	650 (2)
Rhode Island..	0	0	0	0	0	0	0	4	4
Tennessee.....	5	13	6	8	1	1	0	0	34
Texas.....	2 (1)	0	0	1	0	0	0	2	5 (1)
Utah.....	1	0	0	0	0	0	0	0	1
Virginia.....	3 (1)	1	0	0	0	0	0	1	5 (1)
West Virginia..	3 (1)	0	2	2	0	0	1	0	8 (1)
Wisconsin.....	0	0	0	0	0	0	0	2	2
Sub-total...	425 (8)	296 (1)	145	90 (2)	27 (2)	9	20 (1)	57 (4)	1,069 (18)
<i>Territories</i>									
Canal Zone....	1 (1)	0	0	0	0	0	0	0	1 (1)
Hawaii.....	1	0	0	0	0	0	0	0	1
Puerto Rico....	6	1	5 (1)	3	1	0	2	0	18 (1)
Sub-total...	8 (1)	1	5 (1)	3	1	0	2	0	20 (2)
<i>Provinces</i>									
Brit. Columbia	3	0	0	0	0	0	0	0	3
Manitoba.....	1	0	0	0	0	0	0	0	1
Nova Scotia....	4	0	1	0	0	0	0	0	5
Sub-total...	8	0	1	0	0	0	0	0	9
Newfoundland	4	0	0	0	0	0	0	0	4
Sub-total...	4	0	0	0	0	0	0	0	4
Total.....	445 (9)	297 (1)	151 (1)	93 (2)	28 (2)	9	22 (1)	57 (4)	1,102 (20)

NOTES: Figures in parenthesis show number of cases resulting in impaired vision.

Excludes health areas in which no cases of ophthalmia neonatorum were reported and those from which no case records are available.

N.R.—Not reported.

\* Louisville cases only.

† 1938 cases.

Table 7.—Analysis of Ophthalmia Neonatorum Cases by Interval Between Date of Birth and Date Symptoms were First Noted

<i>Interval between date of birth and date symptoms first noted</i>	<i>Gonorrheal infections</i>		<i>All other cases</i>	
	<i>Number</i>	<i>Per cent of total</i>	<i>Number</i>	<i>Per cent of total</i>
Under 1 day.....	16	4.7	105	14.3
1 to 2 days.....	60	17.6	200	27.4
3 to 6 days.....	145	42.6	189	25.8
7 to 13 days.....	94	27.6	219	30.0
14 to 20 days.....	12	3.5	13	1.8
21 to 27 days.....	7	2.0	2	.3
28 days or more.....	7	2.0	3	.4
Not reported.....	14	..	16	..
Total case records (ex. not reported).....	341	100.0	731	100.0
Range.....	Under 1 day to 34 days		Under 1 day to 33 days	
Median.....	5 days		4 days	



Table 8.—Analysis of Ophthalmia Neonatorum Cases by Place and Type of Medical Care

Health area	Hospitalized—care by			At home—care by			Place and type of care N.R.	Total case records, 1939
	Oph- thal- molo- gist	Other physi- cian	Nurse	Oph- thal- molo- gist	Other physi- cian	Nurse		
States								
Alabama.....	0	4	0	1	4 (1)	0	3 (1)	12 (2)
Arizona.....	0	4	2	0	2	0	0	8
Arkansas.....	1	4	0	0	2	0	0	7
California.....	5 (1)	6	0	0	0	0	4 <sup>a</sup> (1)	15 (2)
Colorado.....	2 (1)	1 (1)	0	0	1 (1)	0	0	4 (3)
Connecticut...	1	1	0	0	0	0	0	2
Delaware.....	1	0	0	0	0	0	3 <sup>b</sup>	4
Dist. of Col....	11 (1)	1	0	0	0	0	14 <sup>c</sup>	26 (1)
Florida.....	2	0	0	0	0	0	1	3
Illinois.....	28 (2)	2	0	0	0	0	1	31 (2)
Indiana.....	5	1	0	0	0	0	3	9
Iowa.....	1	0	0	0	0	0	3	4
Kentucky*.....	0	41	0	0	0	0	0	41
Louisiana.....	0	0	0	0	1	0	1	2
Maryland.....	2	1	0	0	2	0	1	6
Massachusetts..	5	0	0	0	0	0	0	5
Michigan.....	4	3 (1)	0	0	1	0	0	8 (1)
Minnesota.....	0	2	0	0	3	0	0	5
Mississippi.....	1	6 (1)	0	8	30	0	9	54 (1)
Missouri.....	1	0	0	0	0	0	0	1
Montana.....	0	3 (1)	0	0	0	0	1	4 (1)
New York State (ex. N. Y. C.)	16	0	11	12	2	4	31	76
N. Y. C.....	22	7	0	0	0	0	4	33
Ohio†.....	16 (1)	91 (1)	27	1	298	216	1	650 (2)
Rhode Island...	3	0	0	0	0	0	1	4
Tennessee.....	15	9	0	0	5	1	4 <sup>d</sup>	34
Texas.....	0	2	0	0	2 (1)	0	1	5 (1)
Utah.....	0	1	0	0	0	0	0	1
Virginia.....	0	0	0	0	0	0	5 (1)	5 (1)
West Virginia..	1	1	0	2 (1)	3	0	1	8 (1)
Wisconsin.....	0	0	0	0	0	0	2 <sup>e</sup>	2
Sub-total....	143 (6)	191 (5)	40	24 (1)	356 (3)	221	94 (3)	1,069 (18)
Territories								
Canal Zone....	1 (1)	0	0	0	0	0	0	1 (1)
Hawaii.....	1	0	0	0	0	0	0	1
Puerto Rico....	1	3	2	2 (1)	8	2	0	18 (1)
Sub-total....	3 (1)	3	2	2 (1)	8	2	0	20 (2)
Provinces								
Brit. Col.....	0	2	0	0	1	0	0	3
Manitoba.....	0	1	0	0	0	0	0	1
Nova Scotia....	2	3	0	0	0	0	0	5
Sub-total....	2	6	0	0	1	0	0	9
Newfoundland..	2	0	0	0	1	1	0	4
Sub-total....	2	0	0	0	1	1	0	4
Total.....	150 (7)	200 (5)	42	26 (2)	366 (3)	224	94 (3)	1,102 (20)

NOTES: Figures in parenthesis show number of cases resulting in impaired vision.  
Excludes health areas in which no cases of ophthalmia neonatorum were reported and those from which no case records are available.

N.R.—Not reported.

<sup>a</sup> 2 hospitalized.

<sup>b</sup> 1 hospitalized.

\* Louisville cases only.

<sup>c</sup> 14 hospitalized.

<sup>d</sup> 2 hospitalized.

† 1938 cases.

<sup>e</sup> 1 hospitalized.

Table 9.—Analysis of Ophthalmia Neonatorum Cases by Duration of Medical Care

<i>Duration of medical care</i>	<i>Gonorrheal infections</i>		<i>All other cases</i>	
	<i>Number</i>	<i>Per cent of total</i>	<i>Number</i>	<i>Per cent of total</i>
1 to 2 days.....	13	4.5	26	3.7
3 to 6 days.....	33	11.3	79	11.1
7 to 13 days.....	89	30.6	191	27.0
14 to 20 days.....	47	16.1	174	24.6
21 to 27 days.....	33	11.3	66	9.3
28 to 34 days.....	29	10.0	57	8.1
35 to 41 days.....	16	5.5	29	4.1
42 to 48 days.....	5	1.7	15	2.1
49 to 55 days.....	13	4.5	8	1.1
56 to 62 days.....	6	2.1	12	1.7
63 days or more	7	2.4	51	7.2
Not reported.....	64	..	39	..
Total case records (ex. not reported).....	291	100.0	708	100.0
Range.....	1 day to 118 days		1 day to 172 days	
Median.....	14 days		15 days	

## Appendix B

### Brief Summary of Data Obtained from Special Survey of Ophthalmia Neonatorum Cases Occurring in New York City, 1931-1936\*

Cases previously reported to the Department of Health . . . . .	23
Total cases found in hospital survey . . . . .	1,344†
Cases resulting in some impairment—total . . . . .	14 (3)‡
	<i>Both eyes</i> <i>One eye</i>
Blind . . . . .	1      6 (2)
Impaired vision . . . . .	2 (1)      5

#### ANALYSIS OF OPHTHALMIA NEONATORUM CASES REPORTED BY TYPE OF REPORTING

<i>Hospital group, by type of reporting</i>	<i>Type of case</i>				
	<i>Gonococcus infections</i>	<i>Other infections</i>	<i>Chemical irritation</i>	<i>Non gonococcus, not otherwise specified</i>	<i>Total all types</i>
	<i>Number of cases</i>				
Hospitals which report:					
All cases, by type . . . . .	40	172	492	0	704
Gonococcus and "all other" cases . . . . .	53	N.R.	N.R.	482	535
Gonococcus and other infections . . . . .	9	57	N.R.	N.R.	66
Gonococcus cases only . . . . .	39	N.R.	N.R.	N.R.	39
No cases occurring . . . . .	0	0	0	0	0
Total cases . . . . .	141†	229	492	482	1,344
	<i>Rate per 1,000 live births</i>				
Hospitals which report:					
All cases, by type . . . . .	.68	2.92	8.35	.00	11.95
Gonococcus and "all other" cases . . . . .	1.79	..	..	16.27	18.06
Gonococcus and other infections . . . . .	.60	3.83	..	..	4.43
Gonococcus cases only . . . . .	.65	..	..	..	.65
No cases occurring . . . . .	.00	.00	.00	.00	.00
Average rate . . . . .	0.73	1.19	2.56	2.50	6.98

\* From manuscript doctorate thesis on "Ophthalmia Neonatorum in New York City," by Harold Horn Lowenstein, M.D., May, 1939.

The study was based on a count of cases occurring in thirty-three hospitals in New York City during the period 1931-1936, inclusive. Live births in these hospitals totalled 192,478, or 31% of the 629,300 live births in the city.

† Excludes 61 cases born outside of the hospital but hospitalized for treatment.

‡ Figures in parenthesis ( ) indicate the number of cases of impaired vision resulting from chemical irritation.

### Case Record for Reporting Ophthalmia Neonatorum

Birthplace (city and/or county and state).....

**Care at birth:** in hosp.....phys.....mdw.....other.....

Prophylaxis at birth: type.....strength.....no. times used.....

Laboratory tests: yes.....no.....

Date reported to health authorities:.....

Date medical care: began.....ended.....

Type of care: in hospital, by oph.....other phys.....special nurse.....

in home, by oph.....other phys.....special nurse.....

Type of treatment.....

General degenerative changes:    both eyes.....one eye.....

Corneal scars: both eyes.....one eye.....

Blind: both eyes.....one eye.....

Vision impaired, but not blind: both eyes.....one eye.....

Good vision retained:                      both eyes.....one eye.....

Any evidence of infection of birth canal diagnosed: g.c.....

other (specify).....not diagnosed.....

Treatment for infection given: yes.....no.....

Nature of treatment, if treated.....

Any special prophylaxis of birth canal of mother before or at time of delivery.....

It is requested that records be secured for all cases reported to health officers. Copies of said records will be forwarded to the National Society for the Prevention of Blindness, Inc., 1790 Broadway, New, York, N. Y., for tabulation. Additional copies of the form may be secured from the Society.

## The Forum

THIS section is reserved for brief or informal papers, discussions, questions and answers, and occasional pertinent quotations from other publications. We offer to publish letters or excerpts of general interest, assuming no responsibility for the opinions expressed therein. Individual questions are turned over to consultants in the particular field. Every communication must contain the writer's name and address, but these are omitted on request

### The Visually Handicapped Child in the Rural Community\*

The visually handicapped child in the rural community presents quite a problem, not only from the educational standpoint, but also from the standpoints of eye hygiene and social adjustment. It is important for this child to get an education, just as it is for any other child, but he must get it in a way that will not further harm his already defective eyes, and that will not add to his emotional upset.

The method generally accepted for educating these children is not always possible in rural communities. To unite three or four small school districts in order to have enough children for a sight-saving class would in the majority of in-

stances be impossible because of transportation difficulties and differences in policy among school districts. For these reasons, we have been attempting for several years to carry on individual sight-saving class routines with the children in various isolated communities.

The program was initiated in Pennsylvania in 1932 by Miss Evelyn M. Carpenter, then supervisor of conservation of vision for the Council for the Blind. It did not get well under way, however, until about 1935, after the interests of the Departments of Health and Instruction were aroused. The Division of School Medical Inspection also co-operated well, as later did the Division of Special Education. The cost of clear-type books was prohibitive for the smaller school districts, so Miss Carpenter conceived the idea of having high schools with commercial courses purchase bulletin typewriters so

\* Condensed from a paper read before the Pittsburgh meeting of the International Council, and reprinted with permission from the *Journal of Exceptional Children*, April, 1940.

that the commercial students could, as a part of their work, copy lesson plans in bulletin type for the visually handicapped children in the district. On the other hand, magnifying lens units were used where advisable, and large type books purchased when possible.

Our program in Allegheny County was started about 1934 by the Prevention of Blindness Department of the Pittsburgh Branch of the Pennsylvania Association for the Blind, as a means of helping the visually handicapped children known to the department to be having difficulty in accomplishing their school work. Large type books were bought by the department and loaned to the children as a demonstration to the school districts. The program has grown slowly, so that we have at the present time 38 children, with sight-saving equipment, spread over 31 different school districts—public and parochial—in Allegheny County and in two neighboring counties. Included in the group are children (1) with progressive conditions who require not only special equipment but also an understanding of their eye conditions by the school and the home, and (2) children with congenitally defective eyes who need sight-saving equipment to help them get along.

We started out with very few large type books. You who have seen price lists for these books know how much more they cost than do

the average texts. We were able to draw on special contributions from women's clubs for the most part, which aided greatly in enabling us to buy more books as our number of referrals increased. Some of the school districts, unable to buy complete sets of books for their youngsters, would purchase several books a year, borrowing some of ours to supplement, and then would return to us theirs and ours at the end of the term. In this way we enlarged our own collection, and had the schools participating in the expense involved. Last year the Pittsburgh Lions' Council gave the Allegheny County Medical Society some money to be used for preventive medicine. The County Medical Society, familiar with our program and aware of the Lions' interest in work with the blind, turned that fund over to us, and with it we have enlarged our collection to the point where, with a great deal of care exercised in the lending, we have available a fairly adequate collection of books.

We do ask that the schools purchase books whenever possible, and also that they provide the soft black lead pencils, dull mat off-white paper, yellow chalk if needed, India ink, and other smaller items. We interpret to the school the need for adequate light, and attempt to locate the best-lighted and best-situated desk in the room for the child. In one instance we were surprised to find that an entire school

building was relighted after we had been unable to find a classroom spot with five foot-candles of light for one of our boys. We do not take credit for that relighting, because the school board and the parent-teachers' association had for some time been contemplating it, but our findings helped to hasten their decision.

Periodic visiting of homes and schools is required for these children. In an ideal situation, probably monthly visits should be made, with perhaps even more frequent visits when the program is first started. Unfortunately, we carry this work as one small part of a large prevention of blindness program, and being inadequately staffed at best, we cannot possibly manage the ideal amount of visiting. We do, however, try to get around to each district several times a semester, particularly to those children who are progressive myopes. Telephone calls help, and it is gratifying to find teachers that are sufficiently interested in their children to call with a list of questions or to write asking for suggestions and advice on particular problems that arise. Many of the teachers have also visited the sight-saving class in Pittsburgh to gain ideas and information.

We well realize that the big type books do not fit the curriculum in most of the schools, and that our program adds an extra burden to already overburdened teachers. Yet

only once have we had a refusal to use the books; always the reply is, "We'll make them fit, even if it does mean extra work and planning." In the one instance where we were refused, the books were later accepted and used because the child in question was a progressive myope, and her eyes became rapidly worse during the school year.

There are a few other provisions that we usually make which might well be mentioned here. We have, with the approval and close supervision of the doctor, loaned the magnifying lens and light units to some children. These units do not work with all children with defective vision (not with progressive eye conditions) and have to be introduced on a trial and error basis. Of two children with identical defects, either, neither, or both may be able to use the unit. One may use it with the light, the other without. When it can be used, it is a help, because it simplifies the program by making special books unnecessary. There is another provision that we have not yet completed, but are in the process of doing. We have several children in parochial schools whose catechisms we are copying in bulletin type. This is being done completely by volunteers and will, we feel certain, be a great help to the children.

There is also a project now under way in Pennsylvania in which twenty-four point type books are being printed for the use of these



children. The first book is by Rugg and Krueger in the field of social studies, and is entitled *Man and His Changing Society*. The printing and binding are being done by the National Youth Administration, under the close supervision and co-operation of the State Council for the Blind. The book will, we hope, be completed by next September.

After the seventh grade we have the problem of no longer being able to obtain the large print books. In some high schools NYA students, or others, act as readers. We feel that if the blind can obtain higher education with the help of readers, surely the visually handicapped can also. For the boys, there are trade schools available in some districts; in others, they can be sent to the schools in Pittsburgh. The same is true for the girls, but it is not quite as popular with them. The vocational problem is about the same as it is for any sight-saving class child, with the additional problem of lack of facilities in the rural area that might be available in the urban community.

The program is always carried out with the approval of the examining ophthalmologist. Cases are referred to us by ophthalmologists, school nurses, principals, and others. It is a common experience to have an oculist ask how he can get a child from X township into the Pittsburgh sight-saving class. We, of course, have to tell him that it is impossible, but that we can set up

an individual program for that child in his local school, if the oculist so desires. Then, after a period of time, that same oculist will call again to ask whether we have any influence in Y district, and whether we can set up a program there. It is gratifying to be able to tell him that no influence is needed—but that we shall be glad to present the problem and the program to the school, and are certain that it can be worked out. Also, we sometimes receive a referral, "Admit to the School for the Blind *unless* sight-saving work is available." That type of referral needs no further explanation, because there is no *unless* for these rural children.

The above sets forth our program. It has been interesting, difficult, even distressing at times, but gratifying at others. All hard spots are erased when the doctor calls to tell us that "Helen can resume normal school activities, because her myopia has been under control for two years with a sight-saving program." This is particularly good when we know that formerly it increased a diopter every six months under ordinary school routine. We realize that we have just scratched the surface of the county in locating the children in need of this special aid; but we feel that the awareness of the possibilities is becoming greater, and hope that some day it may grow to the extent where it can be taken out of the

hands of our private agency and carried by special educational departments where it rightfully belongs.

—MARCELLA S. COHEN  
Pittsburgh, Pa.

### Nursing Functions Which Contribute to the Promotion of Eye Health\*

#### Introduction

This statement was prepared by the Nursing Advisory Committee of the National Society for the Prevention of Blindness† to show how the nurse in any phase of nursing may help to promote eye health. Public health nursing aspects in this outline have been cleared with the National Organization for Public Health Nursing.

Protection and promotion of eye health are a function of nursing. Indirectly all nursing functions which contribute to general health also assist in maintaining the health of the eyes and in saving sight. The prevention of ophthalmological conditions, however, lies largely in recognition of the interrelation of eye health and general health and in the

development of health, educational, industrial, and social programs which give adequate consideration to the maintenance of eye health. Nursing functions in such programs contribute both directly and indirectly to the health of eyes.\*

#### Nursing Functions

The functions of the nurse in relation to eye health are outlined as follows:†, ‡

1. To help analyze problems related to eye health and participate in formulating adequate health programs with due regard to eye health.
2. To help develop and co-ordinate community services and programs for the protection and promotion of general and eye health, utilizing community resources to aid individuals.
3. To assist in adjustment of environmental conditions to favor the health, safety, and comfort of the eyes through:
  - a. Helping to eliminate hazards to the eyes.
  - b. Helping to secure adjustment of lighting and posture to meet individual needs for safe, com-

\*Mumford, Eleanor W. A Program for Staff Education—Eye Health. *Public Health Nursing*, vol. 32, nos. 2 and 3, February and March, 1940, pp. 112–121, 197–202. Available in reprint form from the National Society for the Prevention of Blindness, New York, N. Y.

†Johns, Ethel, and Pfefferkorn, Blanche. An Activity Analysis of Nursing. Committee on the Grading of Nursing Schools, National League of Nursing Education, New York, N. Y.

‡Functions in Public Health Nursing. *Public Health Nursing*, vol. 28, no. 11, Nov., 1936, pp. 732–736.

\*Published simultaneously in the *American Journal of Nursing*, *Public Health Nursing*, and the *Sight-Saving Review*.

†The members of the Nursing Advisory Committee are Katharine Tucker, Chairman, Naomi Deutsch, Elinor D. Gregg, Mary B. Hulsizer, Joanna Johnson, Pearl McIver, Josephine McLeod, Cora Shaw, Ruth Sleeper, Marguerite A. Wales, and Eleanor W. Mumford, Associate for Nursing Activities, National Society for the Prevention of Blindness.

fortable, and efficient use of the eyes.

4. To assist in medical examinations, including ophthalmological examinations, and in arranging for such examinations and in administering or supervising screening tests to discover visual defects and eye disturbances.

5. To note evidences of normal and abnormal ocular functioning, referring to physician individuals presenting evidences of deviations from normal.

6. To teach scientific health facts and practices related to the health of the eye. Some of the points for emphasis are:

- a. The relation of normal eye functioning to (1) general health; (2) nutrition; and (3) practices in the use of the eyes in health and in illness.
- b. Protection of the eyes from injury and infection.
- c. First aid principles and practices as applied to eye injuries.
- d. Resources for authentic eye health information and for care of ophthalmological and related systemic conditions.

7. To help secure adjustment of visually handicapped individuals through:

- a. Interpreting to the patient, family, school or industrial personnel, or social agency the problem and its relation to general physical, mental, and emotional health and its social implications.
- b. Assisting in the adjustment of educational, recreational, and vocational conditions to meet the needs of the individual.

c. Developing, maintaining, and utilizing community resources for the visually handicapped.

8. To help prevent and minimize damage to the eyes from disease, injury, and infection, through:

- a. Discovering individuals with eye conditions and related health problems, and helping to secure early diagnosis and medical care.
- b. Rendering or securing nursing care of the sick and of those suffering from ocular disturbances.
- c. Teaching by demonstration and supervising care given by relatives or attendants, giving due consideration to (1) eye manifestations of systemic disease; (2) systemic and local symptoms of ocular disturbance; (3) protection of the eyes from infection and injury and from strain during illness and convalescence; and (4) adjustment of factors which favor eye comfort with special attention to conditions of close eye work during illness.
- d. Assisting in the prevention and control of infections and of communicable diseases which affect the eyes; encouraging early immunization, early medical diagnosis, isolation, and adequate care throughout illness and convalescence.
- e. Assisting in the prevention and control of non-communicable diseases which affect the eye; encouraging periodic physical examinations, including ophthalmological examinations.

### Points for Emphasis

Through the application of these functions, the following points should be emphasized in both the preventive and curative aspects of programs for maternal health, for the health of infant and preschool children, for the health of school children, and for the health of adults.

1. *Maternal Health.*—A program on maternal health should include:

- a. Nutrition.
- b. Elimination of accident hazards in the home and the relation of lighting and vision to accidents.
- c. Early discovery and adequate care of toxemias of pregnancy.
- d. The prevention and control of syphilis and gonorrhea.
- e. The prevention and control of ophthalmia neonatorum, including the use of an adequate prophylactic, prompt reporting, early medical and nursing care.
- f. The significance of hereditary factors and the early discovery of abnormalities in newborn babies.

2. *The Health of Infant and Preschool Children.*—The following aspects should be emphasized:

- a. Normal eye functioning and the development of muscle coordination; early medical care for children whose eyes do not appear to function normally.
- b. Practices in use of the eyes which recognize the status of normal eye development in children of this age.

- c. Development of methods for discovering children in need of ophthalmological care, including observation and simple screening tests.
- d. Periodic health examinations, including examinations of the eye; correction of defects.
- e. Nutrition.
- f. Preventing eye accidents; encouraging use of safe toys.
- g. First aid in eye injuries.
- h. Prevention and control of communicable disease, including immunization and particular consideration to the care of the eye in the acute communicable diseases, and to the eye aspects of late-developing congenital syphilis.
- i. Safeguarding the eyes of children from strain during convalescence from illness.

3. *The Health of School Children.*—All that is included under the health of infant and preschool children should be applied also to school children. In addition, special consideration should be given to:

- a. A school environment which is safe and conducive to favorable practices in the use of the eyes; provision of visual materials suitable to the normal eye development of children of school age, proper lighting, and adequate safety devices.
- b. A curriculum which recognizes the developmental factors of eye health and provides opportunities for children to develop habits favorable to eye health.
- c. A health service which assists in the discovery of eye problems and related general

health problems of individual children and helps parents to arrange for needed care.

- d. Adjustment of educational and recreational programs and facilities for visually handicapped children.
- e. Interpretation to parents and teachers of the mental and emotional aspects of visual handicaps.
- f. Elimination of eye hazards in schools and playgrounds and provision of adequate safety equipment.

4. *The Health of Adults.*—The points which are enumerated below should receive special consideration in colleges and industrial health services as well as in other services to adults.

- a. Periodic health examinations, including examination of the eyes; correction of defects.
- b. Danger to eye health from:
  - (1) Focal infections.

- (2) Communicable diseases, especially tuberculosis, syphilis, and gonorrhea.

- (3) Noncommunicable systemic diseases such as nephritis, diabetes, cardiovascular diseases.

- (4) Injuries and burns.

- (5) Irritants such as heat, dusts, and other industrial hazards.

- (6) Chemicals, drugs, and other types of poisoning.

- c. Adequate safety devices for the prevention of eye injuries.

- d. First aid in eye injuries.

- e. Environmental factors conducive to safe, comfortable, and efficient use of the eyes, including adjustment of lighting to visual needs; selection of visual materials.

- f. Emotional and social aspects of visual handicaps and adjustment of handicapped individuals; correlation with programs for rehabilitation of the handicapped.

## News of State Activities

THIS Section is devoted to the reporting of sight conservation activities carried on by official and voluntary agencies throughout the country. It presents information supplied by these groups, and serves as a medium for exchange of experiences. Brief and timely items only can be used, because of the limitations of space

### Illinois

*"Trachoma Clinics.*—A very close watch is being kept in the Illinois Trachoma Clinics in regard to the type of cases now reporting for treatment. It has been found that during the past year only twelve Stage I cases have reported. This figure has considerable significance and may mean that we are reaching the outer edge of the control of this disease in Southern Illinois.

"In order to be sure that every single case in the sixteen southern counties of the State has been diagnosed, the Illinois Society for Prevention of Blindness started on September 1 to run a series of diagnostic clinics each Saturday morning in different towns. These are all small towns, far removed from any of the trachoma clinics so that transportation might have kept people from coming into the big clinics. The schedule for these clinics is as follows:

"September 7, 1940.....	Eddyville	Vienna
September 14, 1940.....	Keensburg	Eldorado
September 21, 1940.....	Pinckneyville	Herrin
September 28, 1940.....	Hearld	Shawneetown
October 5, 1940.....	Alto Pass	Jonesboro
October...12, 1940.....	Bay City	Vienna
	(Boaz, Rosebud)	
	(New Liberty)	
	(Hamburg)	
October 19, 1940.....	Rinard	Eldorado
October 26, 1940.....	Chester	Herrin
	(Tamora)	
November 2, 1940.....	Karbers Ridge	Shawneetown
November 9, 1940.....	Bell Rive	Eldorado
November 23, 1940.....	Grand Tower	Jonesboro
November 30, 1940.....	Mt. Carmel	Eldorado"

—*Illinois Society for the Prevention of Blindness, Chicago, Ill.*

### Indiana

"The Committee on Conservation of Vision of the Indiana State Medical Association will have an Educational Exhibit at the Indiana State Fair at Indianapolis this year. Blind workers will operate a loom and cane chairs to attract attention to the booth, which will contain attractive posters to convey the message of prevention.

"The Committee also joined with similar Committees from other states in introducing a resolution in the meeting of the American Medical Association at New York this year, requesting the coordination of the work of conservation of vision throughout the United States, by a Committee to be appointed by the officers of the American Medical Association.

"The Resolution was adopted by the Section of Ophthalmology of the A. M. A. and sent to the governing body.

"Dr. C. W. Rutherford spoke, in June, before the Lions Club State Convention at Richmond, on Conservation of Vision."

—Committee on Conservation of Vision,  
Indiana State Medical Association, Richmond, Indiana

### Kentucky

*From Linda Neville.*—"With the gradual extension of the so-called full-time health departments into more and more counties—they are now in 80 or more counties—there has been a gradual annual increase in the number of newborn gonorrheal babies discovered, with a consequent gradual annual increase in the number of appeals to me for hospitalization. In the first few months of each fiscal year I try to postpone the admission of patients who need surgery for cataracts and to accept as patients, besides the gonorrheal cases, only such emergency cases as those needy eye sufferers with glaucoma or with recent eye accidents. I try to husband our finances for the benefit of the indigent gonorrheal babies, who, alas! are sure to need to come for hospitalization.

"About 30 days before the close of the past fiscal year, on June 30, about 15 days before the closing of certain figures with the estimate for expenditures likely to be made between June 15 and the end of the fiscal year, I was much upset in mind. On about June 1, several hundred dollars of the appropriated \$2500.00 were still unclaimed by me. I began quickly to offer hospitalization to a number of applicants, planning to send several to St. Joseph Infirmary, Louisville, for board, at one dollar per day, and operating room thrown in without charge. Soon there were several patients there. And soon, too, there were brought to us at Lexington some



gonorrheal babies, who, of course, could not be kept waiting. And when June 15 came, instead of my being able to present to the State, with assurance of payment, an estimate of the expenses to be incurred through June 30, I found that all the appropriation had been used up by our patients' expenses and that July first would find the Mountain Fund in debt many, many dollars.

"During this six-months period just passed, from July 1 to January 1, even though I delayed hospitalizing many applicants, yet the emergency cases used up more than one-half the annual appropriation. Four gonorrheal babies, the first arriving November 4, and not one of them left in the hospital after December 23—these four babies ran up a total account for hospitalization and for nursing of \$1,072.40 chargeable against our State appropriation. (A certain fiscal court had agreed to pay for the baby from its county the hospital and nursing cost for ten days, and ninety-two dollars and forty cents was the amount.) From July 1 to November 4 expenses for other patients had already run up into hundreds of dollars. It is a matter of great satisfaction to me that not since the departure from the hospital of the last of those four gonorrheal babies has there come in any new case. (This is January 17, 1940.)

"As a mere lay person I hesitate to say anything even in description about the various methods used by various oculists or by one oculist at various times for the prevention of blindness from gonorrheal ophthalmia among the babies.

"Among the Lexington oculists who have cared for our gonorrheal cases there are different usages, different drugs. There seems to be no uniformity of procedure.

"Soon after the discovery of the efficacy of sulfanilamide against the gonorrheal germ, it was used on our newborn gonorrheal babies, if they seemed in condition for it. Whenever a baby with gonorrhea came to us soon after premature birth, and whenever a baby with gonorrhea came to us weighing less than five pounds—one weighed about three and one-half pounds—there were precautions to take. But the discussion of medicine would be out of place here.

"From March 1, 1936, through to January 1, 1940, even though there was some question as to the diagnosis in the case of two or three babies, there were 41 babies under my care, each with a definite diagnosis of gonorrheal ophthalmia. Of these 41, as I recall—and the facts were so burned into me that I hardly need study records about them—there were two babies blind in both eyes upon arrival and two other babies although blind in both eyes upon arrival yet retaining light perception each in one eye. It happened that of the first two babies mentioned above, both had been born

prematurely, and one died in the hospital. Then of the 51 babies, one lost the sight of one eye in the hospital and another lost the sight of both eyes there. This baby, who left the hospital with both eyes blind, died within a few weeks.

"Of the 51 babies, two developed each a scar in one eye; but in neither case was the scar blinding, or even interfering much, if at all, with sight.

"Of the 51, if my memory is serving me aright, and I think it is, 49 babies left the hospital, two having died there; and of the 49, 41 upon leaving the hospital were not only free of gonorrhea but had eyes free of scars.

"I believe that our record is one to be thankful for, even though I find that my distress over one eye blinded—rather, not saved from blindness—in the hospital is hardly counterbalanced by my joy over the rescue of all those other eyes.

"When the day nurse and the night nurse are discharged after having brought to a successful issue the nursing of one of our gonorrheal babies, after six or eight weeks of hospitalization, I may fail to pay to those nurses the tribute of praise that is rightfully theirs.

"I have no part in the nursing. I am not a nurse. But every baby with gonorrheal eye infection for whom I undertake to provide treatment has already in writing been entrusted to me personally. And I am responsible morally even though the parent or the guardian promises not to hold me responsible. That means responsible legally.

"In 1939, besides 14 young babies with gonorrheal eye infection that we hospitalized in Lexington as patients of the Mountain Fund, there were two more babies. One of these babies, a colored baby from Hart County, had been reported by the State Department of Health laboratory as positive for gonorrhea, but when the baby entered the Lexington hospital the laboratory report there was negative. And the quickness with which the eyes were cleared of all discharge confirmed the Lexington oculist in his diagnosis of 'no gonorrhea.' For a short time before being brought to Lexington the baby's eyes had treatment. That treatment had probably been completely effective in destroying the gonorrheal germs. Although we do not count that baby as among our own babies with gonorrhea, yet I shall say that, because of the fact that the baby's laboratory report had been positive, we had to take the precautions incident to the care of a positive case with the consequent high per diem cost for isolation and special nursing.

"It may not be amiss here to say that in some cases the oculists have had to defer their diagnoses. One baby whose eyes failed to show clinical signs of gonorrhea upon admission immediately was

found to have a laboratory report that was positive. In another case when upon admission the eyes were showing several symptoms indicative of gonorrhea the laboratory reports were at first and for some days negative, afterwards turning to positive. The policy of our oculists is to consider such doubtful cases as positive and to order isolation and special nursing.

"In addition to the 14 babies with positive gonorrhea of the eyes and the fifteenth baby found free of gonorrhea upon arrival there was a sixteenth baby. This baby, when two weeks old, was by long distance telephone from the Hickman County Health Department reported to me as needing immediate enucleation of one eye blinded by gonorrhea. After the surgery was done for the baby in a Mayfield hospital I secured payment of the hospital bill by the State. In that way that baby is included among the gonorrheal babies in my list, with the explanation that in a strict sense it was not our baby."

### Missouri

*"Anti-Fireworks Crusade."*—The Committee for the Conservation of Eyesight of the Missouri State Medical Association has made arrangements with the Missouri State Health Department to install an exhibit at the Fortieth Annual Missouri State Fair in behalf of a state law forbidding the indiscriminate use of fireworks throughout the state.

"More than a quarter million people attended the fair last year and it is to be hoped that enough people can be interested in the proposed law that it will be passed at the next session of the legislature in 1941.

"St. Louis, Kansas City, and many other cities throughout the state have such ordinances and the saving of life, limb and sight has been so outstanding that a state law is desired.

"It is of interest to report that the resolution of the Committee on Conservation of Eyesight of the Missouri State Medical Association to the American Medical Association was instrumental in influencing that body and its eye section to adopt a resolution to appoint a Conservation of Vision Committee of the A.M.A."

—Committee on Conservation of Eyesight,  
Missouri State Medical Society, St. Louis, Mo.

## Tennessee

*"What Has Been Done and Accomplished by the Sight Conservation Service, May 6, 1938, to June 13, 1940.—1.* Twenty-eight hundred cases of blindness have been surveyed and classified as to their causes of blindness and a report submitted upon them. This group represents 2,500 cases from the Aid to the Blind Survey, which is now up-to-date; 170 cases from the Survey of the Tennessee School for the Blind, which was made in October, 1938; 125 cases from a Survey of Office Cases handled during the fiscal year 1938-1939; and 5 cases from the Fireworks Survey conducted in 1939. Important facts that this survey disclosed are: 1,362 of these cases for a total of 48.6 per cent have a chance to have varying amounts of sight restored in one or both eyes, and approximately 43 per cent of this group have a chance to have enough sight restored to them to permit of some gainful occupation; 1,820 of these cases for a total of 65 per cent might have had blindness in one or both eyes prevented if the proper preventive measures had been in existence or available, and if full co-operation had been obtained from each party connected with each individual case of blindness, either before blindness occurred or while it was coming on.

"2. Geographical surveys on the cases of trachoma and ophthalmia neonatorum occurring in these 2,800 cases were conducted and disclosed the following:

"A. Fifty-two per cent of the trachoma cases occurred in middle Tennessee, 30 per cent in western Tennessee, and 18 per cent in eastern Tennessee.

"B. Fifty per cent of the ophthalmia neonatorum cases occurred in eastern Tennessee, 28 per cent in middle Tennessee, and 22 per cent in western Tennessee.

"3. Forty-eight talks on the causes of blindness and their prevention have been made by the Director of the Service during this period before various lay, medical, and nursing groups, reaching approximately 5,250 persons.

"4. The talking slide film on 'The Nurse's Responsibility in Saving Sight' has been shown 21 times to various lay, medical, and nursing groups, reaching approximately 2,400 persons.

"5. Two sight-saving classes have been established with the assistance of this service, both in Nashville: one in the Public School System and one in the Tennessee School for the Blind, caring for from 24 to 27 visually handicapped children.

"6. Three sight-saving class teachers have had special training for this work.

"7. The Centennial Club of Nashville makes available each year \$200, which may be used either for the purpose of training a sight-saving class teacher, or for the purchase of non-expendable equipment for a sight-saving class.

"8. One hundred and three children have been found who are eligible for enrollment in sight-saving classes, either permanently or temporarily, and their visual handicap has been corrected as much as it could be corrected.

"9. Three hundred and fifty persons, the majority being children, have had varying amounts of vision restored to them in one or both eyes; 11 other persons have had surgical operations to restore sight and some sight has been restored to all.

"10. Two hundred and five persons either have had or are having partial or total blindness prevented in one or both eyes, the majority being children; the chief causes of blindness being prevented were blindness due to amblyopia exanopsia, sympathetic ophthalmia, glaucoma, trachoma, pterygia, focal infections, and possibly progressive myopia.

"11. Four of our Lions Clubs are carrying on active co-operative programs with the service, these being: the Nashville Club, the Gallatin Club, the Waverly Club, and the Centerville Club. All of these programs are concerned with the visually handicapped child. Other Lions Clubs over the state, from time to time, have assisted the service at its request in individual, single cases.

"12. The co-operation of the eye physicians of the state was obtained in the very beginning of the work and has been maintained. The eye physicians of the state have contributed approximately \$14,000.00 worth of medical care to indigent persons referred to them by the service.

"13. During the last 11½ months there has been an increase in sight restoration by 6.3 per cent over the previous year and an increase in the prevention of blindness of 41 per cent over the previous year, with an expenditure of \$370 less of state funds.

"14. During this period, funds for glasses and hospital expenses in the amount of \$2,044.14 have been contributed by various Lions Clubs, Civic Clubs, Women's Clubs, Parent Teachers Associations, interested individuals, and a few patients.

"15. A co-operative plan for preventing blindness and restoring sight by the eye physicians and hospitals of the state has been prepared and has been accepted by my advisory committee of ophthalmologists and a few hospitals, but, as yet, has not been accepted by the state, due to insufficient funds to put it in operation.

"16. During the first year of operation a sufficient number of people were rendered ineligible for Aid to the Blind to result in an

annual saving of \$12,300.00 to the State and Federal Government and it can be anticipated that enough persons will be rendered ineligible for Aid to the Blind during the second year, not only to equal this amount, but to exceed it."

—*Director, Sight Conservation Service,  
Tennessee State Department of Health, Nashville, Tenn.*

### Washington

"A volunteer speakers' bureau of eye physicians was organized during the winter of 1939-40. These ophthalmologists were located in the various parts of the State, and have been available for talks before club groups, lodges, P.-T. A. and other school groups. In addition to discussion with the eye physicians making up this volunteer group, an outline was given to each ophthalmologist suggesting the subject matter which should be covered. The speakers' bureau will continue through this next year with the same subject matter. At a later date, after fairly good coverage has been secured on these subjects, the Medical Eye Advisory Committee to the Division for the Blind hopes to continue the speakers' bureau service with a new outline of subject matter. The Division for the Blind has found that the speakers' bureau service has been readily accepted by local groups and is considered an important part of community education regarding eye care and common causes of preventable blindness."

—*Division for the Blind, State Department  
of Social Security, Olympia, Washington*

## Note and Comment

**Eyes are Expensive Targets.**—The United States Compensation Commission recently reported the results of a study of 47,306 eye injuries occurring to WPA project workers in two and a half years. The total direct cost of these injuries was found to be \$1,464,061, or five cents per \$100 payroll, and, with the addition of the indirect costs, the estimated financial toll was cited at \$7,320,305, or \$155 per eye injury case.

It was found that eye injuries involving no loss of time accounted for 85 per cent of the cases reported, 18 per cent of the total direct cost, and averaged \$6.38 per case. Eye injuries causing temporary total disability accounted for 13 per cent of the injuries surveyed, 10 per cent of the total direct cost, and averaged \$25 per case with an average disability duration of 12 days. Of the 1,072 eye injuries resulting in permanent disability, 25 such injuries, or 2.3 per cent, involved permanent total disability. The average direct cost per permanent partial disability was found to be \$907 and that of the permanent total cases \$4,278. Of the 1,047 permanent partial disability cases, approximately 12 per cent represented enucleations, the remaining 88 per cent being functional disabilities of a permanent nature averaging about 60 per cent loss of vision of an eye.

The Commission also reported that eye injuries represented 6 per cent of the temporary injury cases reported, 13 per cent of the cases reported with no loss of time, and 20 per cent of the permanent injury cases reported.

**The Treacher Collins Prize Essay.**—The Council of the Ophthalmological Society of the United Kingdom has instituted a triennial prize of 100 pounds for the best English essay submitted by a qualified medical practitioner of any nationality, on a subject selected by the Council. One award having been made, the closing date for submission of essays for the second award will be December 31, 1941. The subject selected is: "Allergic Affections of the Eye and Its Adnexa." Essays should be submitted, or inquiries addressed, to the Honorable Secretary, Ophthalmological Society of the United





Presentation of Leslie Dana Gold Medal—1940

Mrs. Anna F. Harris, former executive secretary of the St. Louis Society for the Blind, presenting the Leslie Dana Gold Medal for 1940 to Mr. John M. Glenn, as Dr. Conrad Berens pays him tribute, at luncheon meeting of the Association for Research in Ophthalmology

Mr. Glenn, who is Honorary Vice-President of the National Society for the Prevention of Blindness, received the award for his outstanding achievements in prevention of blindness and the conservation of vision. He was selected for this honor by the St. Louis Society for the Blind, through which the medal is offered by Mr. Leslie Dana, of St. Louis.



Kingdom, 5 Racquet Court, Fleet Street, London, E.C. 2. Material entered in this contest should not reveal the identity of the author, but must be marked with a distinguishing pseudonym or quotation which should also appear on a sealed envelope containing the candidate's name and address.

**Glasses for the Color-Blind Motorist.**—Dr. Brittain Payne points out in a recent issue of the *American Journal of Ophthalmology* that lenses, the upper one-fourth of which is of dark red glass, have recently been introduced for the benefit of the color-blind. The principle of the glasses rests on the filtering out of the "green light"; when a light is seen through the red segment, the motorist knows that either the stop or the caution signal is in operation. All types of color-blindness react in the same way to the glasses, and they can also be used for the person who is not color-blind.

Several years ago spectacles with a red-free filter were introduced. With these the driver sees a dark image for the red signal and a bright light for the green and yellow. The new glasses are thought to be less confusing, however, as the motorist knows he must stop when he sees any light whatsoever and does not have to depend upon a change of intensity.

**Blindness in Australia.**—Sir James Barrett, in his presidential address before the Ophthalmological Society of Australia, dealt not only with the causes and prevention of blindness and partial-sightedness, but also gave an interesting account of the history of the invention of the Braille type. He indicated that the treatment of ophthalmia neonatorum is well understood and not very common in Australia, and that many sufferers from congenital syphilitic blindness are subnormal generally. Although there seems to be an increase of myopia and retinitis pigmentosa in this country, trachoma, once a scourge, is rapidly declining. In Melbourne, trachoma patients are now seen and treated as old cases, although forty years ago this was the principal part of an oculist's work. It is said to be still common in western New South Wales and Queensland. Sir James commented on the successful use of prontosil for the treatment of trachoma, which has been used in the United States, and said that it is now being tested in Melbourne. He also

recalled that out of a quarter of a million British troops stationed in Egypt, where 80 per cent of the people were afflicted with trachoma, there were only 50 cases among the British troops.

**Retinitis Pigmentosa and Night Blindness.**—A familial picture of night blindness reported in three of four generations is presented by Dr. Lyle S. Powell and Richard L. Dunlap in a recent *Journal of the Kansas Medical Society*. As night blindness is observed to be a common symptom of retinitis pigmentosa, the authors present the history of an adult male patient whose grandfather and two siblings, whose father, and whose six brothers and sisters have experienced difficulty in seeing after dark. Two siblings of the patient, as well as three of his father's, and the three children of the patient—the fourth generation, now in their late teens—have been unaffected. Ophthalmoscopic studies of the subject showed a typical fundus picture of retinitis pigmentosa. Although its cause remains unknown, this disease has been frequently observed to affect certain families—notably those in which related marriages have taken place. The authors discuss the two etiological theories, giving consideration to recent indications of two forms of retinitis pigmentosa—one a dominant, fairly frequent form, and possibly hereditary, recessive forms. No correlation has been found to be clinically demonstrable between the dominant and the recessive types. However, the four generations noted by Drs. Powell and Dunlap appear characteristic of the dominant type of affected family, the transmission occurring through the male members.

**The "Black-Out" and Eyestrain.**—As the black-out in warring countries affects many conditions of ordinary life, the National Ophthalmic Treatment Board in England has recently published a little pamphlet giving suggestions for relieving and avoiding eyestrain under these circumstances. The author advises following the example of the countryman and the old-time townsman by keeping indoors as much as possible and going to bed earlier. As more close work, as knitting and sewing bandages, is done at home than in peace time, it is suggested that this type of work be spaced out with games, several of which are mentioned. When it is necessary to go out at night during the black-out, the Board requests that

the light be kept pointed downwards so that the individual may see where the curbstone lies, so that others will see the spot of light on the ground and will not run into the pedestrian, and so that other persons on the street will not be dazzled and momentarily blinded by suddenly having a light flashed in their eyes.

**Schools Throughout Country Install Improved Lighting.**—One of the most striking features of a report on a year's progress in illumination, printed early in 1940 after presentation at the 1939 Annual Convention of the Illuminating Engineering Society, is that section which deals with the relighting of schools. A Georgia city has completed installation in its entire system of eight schools of modern indirect illumination averaging better than 20 foot-candles of light per desk. In Philadelphia, plans were drawn and completed, and work begun, on the relighting of some 5,000 school-rooms. Shaw High School in Cleveland, repainted and relighted, is considered so outstanding an example to educators as to achieve the reputation of a model. Further evidence of aroused light consciousness appears in the statement that one eastern school builds study lamps complying with I.E.S. specifications as part of its manual training course. Survey figures presented indicate that the recommendations carried in *American Recommended Practice of School Lighting* are now from 10 to 20 per cent realized.

**Vitamin D in Relation to Progressive Myopia.**—The significance of Vitamin A in treatment of night blindness has received much recent attention, but studies of the Vitamin D complex in relation to progressive myopia represent a new advance in prevention and alleviation of this ominous and baffling eye condition. An article on the subject in the *American Journal of Ophthalmology* states that myopia treated from the standpoint of rectifying vitamin deficiency shows encouraging response to ingestion of Vitamin D, leading the author, Dr. Arthur Alexander Knapp of New York, to hope that the cause of this defect is nearer solution. Conspicuous deficiencies of calcium have been related to myopic eye conditions and Dr. Knapp reports indications that the Vitamin D complex plays a part in the etiology of keratoconus. Dogs used in preliminary experiments manifested induced myopia resulting from diets low in

calcium and deficient in Vitamin D. Selected human patients with established myopia believed to be progressive were chosen for further study, regulated amounts of calcium tablets and Viosterol being the only innovation in their diets during the trial period. Summaries show that 66.67 per cent of the patients adhering to the prescribed regimen either remained stationary or showed a reduction in their myopia. In the entire series of studies, 50 per cent revealed reduction in their visual deficiency, or were unchanged when re-examined. It is suggested that the vision of patients manifesting a diminishing hyperopia may also be improved by calcium- and Vitamin D-fortified diets.

**Travelling Ophthalmologists Check Trachoma.**—Mobile treatment units in European and Oriental countries advance into the rural and isolated districts in the fight against trachoma. Traveling eye clinics, supervised by ophthalmologists, patrolled many remote sections of Poland, treating 28,000 patients and performing 885 operations, during the summer of 1936 alone. A similar unit, organized by the Japanese Red Cross, operates in Nagasaki, at moderate cost, reaching and treating several hundred trachomatous patients daily.

The Delhi Province of India boasts a travelling dispensary especially designed for handling of eye cases in its rural areas. It is also a surgery and an ambulance, whose doctors and nurses disseminate popular health educational material.

**Soldiers' Eyes Visored Against Blindness.**—Most of the eye casualties of the last war resulted from penetrating eye wounds caused by small metallic fragments. Well over half the total war blindness was caused by fragmentation from explosives. ". . . It is surely fundamental that prevention should precede treatment," said Sir Richard Cruise, presenting for unanimous approval by the annual congress of the Ophthalmological Society of the United Kingdom a perfected protective soldier's visor. Based on experiments destructive to exposed human eyes, the soldier's visor is a molded duralumin shield fitted and riveted to the inner curvatures of the helmet. By a spring attachment it may be raised above the eyes, within the helmet, or easily lowered when required. The

perforated section is of a mesh so fine that, while complete protection from flying particles is afforded, the vision of the wearer is but slightly interfered with. Since the cost of manufacture is negligible and the total weight of visor and adjustments very light, a resolution recommending immediate adoption of the visor was enthusiastically passed.

**Local Use of Vitamin A in Ophthalmic Conditions.**—Dr. Stephen de Grósz of Budapest, finds that the local application of vitamin A is of greater significance in the field of ophthalmology than is oral or intramuscular administration. It has been customary among laymen in Hungary to apply milk and butter to the eye for treatment of various ocular diseases irrespective of their etiology. The local application of vitamin A was first undertaken by Russian observers; cod-liver oil was employed by Lohr for trophic conditions; E. Stephenson in England drew attention to its use in keratitis due to mustard gas; Federici held that it was more effective than synthetic remedies. De Grósz, using a preparation containing 1,000 international units of vitamin A in one centimeter of oil or ointment, finds it not only of value in promoting epithelization of fresh corneal lesions, for example, erosions after extracting foreign bodies, but that it also has a powerful analgesic effect, which has made it invaluable for injuries from industrial gases, and in warfare. The oily preparation is beneficial for wounds of the eyelids as well as for injuries and burns of the conjunctiva. In his experience the most important indication for local treatment with vitamin A is in the herpetic forms of corneal disease, in which cases the epithelium is loosened by the first movement in the morning and torn off with great pain. This can be prevented by instilling vitamin A oil at night. He notes an excellent example of this in a case of alcoholization of the Gasserian ganglion with subsequent severe keratitis. De Grósz concludes that vitamin A as a local remedy not only helps epithelization but is truly a protective agent for the epithelium.

**Fewer Young Eyes Darkened by Blindness.**—Convincing proof of lowered incidence of infant blindness appears in a reporting of the age groups represented in a registered blind population of 1,807



persons resident in Sunderland, England. The total of 1,807 included no infants under one year of age, and but a single child less than five years old!

**Alvin L. Powell.**—The REVIEW reports with regret the death of one of its valued editors, Mr. Alvin Leslie Powell, whose work in illuminating engineering is known to all. Mr. Powell not only served on the editorial board, but was always ready to be of help in giving his valuable advice on the subject of lighting to members of the Society's staff. Among his practical achievements were the lighting in Rockefeller Center, for which he was lighting consultant, and lighting effects used in Radio City Music Hall, many of which he originated.

**Dr. Park Lewis.**—As we go to press, we announce with sorrow the death of one of our founders, our beloved Vice-President, Dr. Park Lewis. A later issue of the REVIEW will be devoted to paying him homage.

## Current Articles of Interest

**The Treatment of Corneal Ulcers**, Mason Baird, M.D., and Grady E. Clay, M.D., *Southern Medical Journal*, April, 1940, published monthly by the Southern Medical Association, Empire Building, Birmingham, Alabama. The occurrence of corneal infection from three sources—trauma or foreign bodies, systemic causes, and by spread from surrounding ocular tissues—is here discussed. Trauma followed by entrance of bacteria is classified as a typical cause of the exogenous ulcer; the tubercle results from endogenous conditions; and phlyctenular and superficial keratitis indicates spread of disease from adjacent tissue. Progressive, regressive and cicatrizing stages of corneal ulceration are successively discussed and described. Subsequent corneal opacities are stated to become less dense with the passage of time, the youth of the patient aiding clearing of the scar. The authors prescribe cleanliness, heat, rest, and protection as acknowledged essentials of treatment. They further commend use of normal saline solution, boric acid solution, 1:3000 metaphen, and direct application to the lid of hot, moist compresses in preference to electric pad or hot water bottle. One per cent atropine sulphate solution dilates the pupil and insures eye rest. Uncomplicated infected and keratitic ulcers are bandaged, and pads changed as frequently as cleansing is necessary. General treatment of all possible foci of infection is emphasized, the teeth being of particular significance. Vitamin therapy is of definite consequence in treatment of corneal ulcers. The authors report startling improvement in cases of kerato-conjunctivitis through a régime of combined vitamin A administration, saline irrigation, and application of pads to the eye while active ulceration persists. The efficacy of sulfanilamide in ophthalmia neonatorum is conceded, but in addition a 5 per cent mercurochrome solution is recommended by Drs. Baird and Clay, who observed no dramatic cure in their treatment with sulfanilamide of other than gonorrheal corneal ulcers. Six years' experience indicates X-ray therapy as the treatment of choice, producing marked and swift decrease of edema and pain. Details of administration

are appended. The authors, in conclusion, deplore a prevailing tendency to overtreat corneal ulcers, advising instead the simplest possible effective treatment.

**Use of Sulfanilamide Compounds in Ophthalmology**, Jack S. Guyton, M.D., Baltimore, Maryland. *American Journal of Ophthalmology*, August, 1939, published monthly by the Ophthalmic Publishing Company, St. Louis, Mo. The use of sulfanilamide compounds in general medicine is reviewed by the author, who presents the following conclusions:

"Forty-three cases treated with sulfanilamide compounds in the Johns Hopkins Hospital because of ocular inflammations are reported, with the following results:

"a. No appreciable effect was noted in 14 cases of 'gonococcal' uveitis, either from the standpoint of alleviating the acute attack or of preventing recurrences.

"b. No apparent effect was obtained in five cases of ocular tuberculosis.

"c. Four out of eight cases of purulent intra-ocular infection exhibited spectacular cures: one of these was a metastatic meningococcal panophthalmitis with beta streptococcus in the anterior chamber, one was a postoperative panophthalmitis with staphylococcus aureus in the conjunctival sac, and the fourth was a post-operative endophthalmitis of unknown etiology.

"d. Significant results were obtained in five cases of infection of the lids or orbit; four of these were known to be due to beta hemolytic streptococci.

"e. Significant improvement was noted in two cases of trachoma (stage 3); improvement was more notable than in two other cases of trachoma treated with intravenous tartar emetic.

"f. Two cases of inclusion blennorrhoea were cured within six days.

"g. A cure of doubtful significance was obtained in one case of pneumococcal conjunctivitis and corneal ulcer by the use of sulfapyridine.

"h. One case of corneal ulcer associated with streptococcal and staphylococcal conjunctivitis responded significantly. (Sulfanilamide was used locally as well as internally.)

"i. No appreciable effect was noted in five other miscellaneous cases."

## Current Publications on Sight Conservation

**Note.**—The National Society for the Prevention of Blindness presents the most recent additions to its stock of publications. Except for the more expensive ones, single copies are sent free upon request. Unless otherwise specified, they are reprinted from *THE SIGHT-SAVING REVIEW*. New publications will be announced quarterly.

**334. Possibilities of Restoration of Sight and Prevention of Blindness in the Aid to the Blind Program,** Anna M. Harrison. 20 p. 15 cts. Describes the work of the State Department of Public Welfare in restoring sight and preventing blindness in Louisiana.

**335. The Visually Handicapped Child in the Rural Community,** Marcella S. Cohen. 12 p. 5 cts. Reprinted from the *Journal of Exceptional Children*, April, 1940.

**336. Personal Reminiscences,** John M. Glenn. 12 p. No one is better qualified to reminisce on the early days of the prevention of blindness movement in the United States than the author, who was a founder of the Society and is today one of the honorary vice-presidents.

**337. Study of Prevention of Blindness from Ophthalmia Neonatorum.** 24 p. 15 cts. This report was prepared in co-operation with

the National Society for the Prevention of Blindness through its consultative relationship with the Committee on Conservation of Vision of the State and Provincial Health Authorities of North America. It supplements the material published in 1939, in publication 301.

**338. Nursing Functions which Contribute to the Promotion of Eye Health.** 12 p. 5 cts. Presented by the Nursing Advisory Committee of the National Society for the Prevention of Blindness, and published simultaneously in the *American Journal of Nursing*, *Public Health Nursing* and the *SIGHT-SAVING REVIEW*.

**D138. Eye Health Problems in Nursing,** Eleanor W. Mumford, R.N. 4 p. (\$1.00 per C; \$7.50 per M.) Presents the subject of the nurse's responsibility in the maintenance of eye health of patients. Reprinted from the *Pacific Coast Journal of Nursing*, August, 1940.

## Contributors to This Issue

**Anna M. Harrison**, who describes the development of sight restoration in the state of Louisiana, is the State Medical Social Worker for the Blind of the Louisiana Department of Public Welfare.

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No one familiar with the sight conservation movement in the United States needs an introduction to **John M. Glenn**, formerly general director of Russell Sage Foundation and a founder and honorary vice-president of the National Society for the Prevention of Blindness.

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**Dr. P. Bailliart** is the president of the International Association for Prevention of Blindness, whose activities have necessarily been suspended because of the tragic European events.

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As supervisor of the Prevention of Blindness Department of the Pittsburgh branch of the Pennsylvania Association for the Blind, **Marcella S. Cohen** is making a continuous contribution in the field of sight conservation.